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## **AUSTRALIAN RADIATION PROTECTION AND NUCLEAR SAFETY BILL 1998**

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### **Second Reading**

Debate resumed from 23 November, on motion by **Senator Newman**:

That these bills be now read a second time.

**Senator FORSHAW** (New South Wales) (11.00 a.m.)—The three bills before us today are very important pieces of legislation. They are the Australian Radiation Protection and Nuclear Safety Bill 1998, P1028 SENATE Wednesday, 9 December 1998 the Australian Radiation Protection and Nuclear Safety (Licence Charges) Bill 1998 and the Australian Radiation Protection and Nuclear Safety (Consequential Amendments) Bill 1998. This package of bills is a very important legislative development in respect of regulating nuclear facilities, nuclear installations and sources of radiation throughout Australia. The key bill, of course, is the Australian Radiation Protection and Nuclear Safety Bill 1998, and it is to that bill that I will be particularly directing my remarks.

I should say at the outset that the opposition is supportive of the passage of the legislation, except we will be seeking to move an amendment at a later stage which would require a public inquiry to be conducted prior to any issuing of a licence for the establishment of a nuclear installation. But I will come back to deal with that in more detail later.

The opposition also notes that, following a hearing of the Senate Community Affairs Legislation Committee on Monday, 30 November this year, the government has accepted a range of proposed changes to the bills to strengthen their provisions. We are appreciative of that. Accordingly, as I said, we are supportive of the passage of the legislation with the one exception that I have mentioned.

The stated purpose of the legislation is referred to in the explanatory memorandum. It states: This Bill proposes to establish a scheme to regulate the operation of nuclear installations and the management of radiation sources, including ionizing material and apparatus and non-ionizing apparatus, where these activities are undertaken by Commonwealth entities. The object of the Bill is to protect the health and safety of people, and to protect the environment, from the harmful effects of radiation.

That, of course, is a very important objective, one increasingly seen by the people of this country and the people of the world to be at the forefront of issues that need to be resolved at both a national and an international level. The more we can do to ensure that the operation of nuclear facilities and installations and the use of radiation are, firstly, for peaceful purposes and, secondly, take place with the absolute safety of the personnel employed in the industry as well as the general public and with no harm or the least harm to the environment the better.

These bills do represent an improvement upon the existing regulatory system at the Commonwealth level. The bills ensure that all Commonwealth entities and their employees involved with radiation and nuclear activities will in future be regulated under the one set of legislation. Previously, as has been recognised in two important reports, there has been an ad hoc approach to regulation and there have been gaps in the application of particular pieces of legislation.

For instance, in 1993, the Research Reactor Review, set up by the then Labor government to look at the future of the Lucas Heights facility, amongst others, concluded that the current regulatory system was inadequate and needed to be more properly codified and, indeed, strengthened. In the report of that Research Reactor Review—it is known as *Future Reaction*; it is more commonly known as the McKin-non review—it states in the executive summary when commenting upon the operation of the Nuclear Safety Bureau:

The regulatory machinery even for the small nuclear industry in Australia is unduly fragmented and unclear, and the scope of responsibility for the current regulatory body—that is, the Nuclear Safety Bureau—

is too limited. Accountability to a Minister different from the one responsible for reactor operations is required.

Further, it states: The IAEA—the International Atomic Energy Agency—licensing requirements provide a suitable basis for licensing arrangements in some other countries which, with adaptation, could be used in Australia.

The arrangement by which the operating organisation ANSTO operates under an Authorisation issued by the ANSTO Board, rather than a licence issued by the regulatory body, is inconsistent with IAEA international principles and requirements.

There is scope for rationalisation of the separate safety and safeguards regulatory regimes which apply to ANSTO. The regulatory body should have unambiguous and effective sanctions to apply to the operating organisation ANSTO to ensure that conditions it imposes are met.

This legislation does reflect in many ways the recommendations of the McKinnon review that I have just referred to. On that basis, it is an important development.

A further report that forms part of the basis for this legislation is that of the Senate Select Committee on the Dangers of Radioactive Waste, which reported in 1996. That is a report that I know is well known to senators, particularly those participating in this debate today. The report was entitled *No time to waste*. That report also expressed concerns about the problems with the current regulatory system.

On page 24 of that report the committee referred to waste which is currently stored at Lucas Heights, an issue that still causes much concern both in the community of that region, the Sutherland shire, and more widely throughout the Australian community. It is an issue that at this point in time has not been satisfactorily resolved. In commenting upon the waste, the committee said:

Disputes surrounding Commonwealth bodies' immunity from State laws are not unique to ANSTO, and they raise broader issues which have not been canvassed by the Committee in this Inquiry. It could be argued that if a Commonwealth body complies with State standards as a matter of policy, then it should have no reason to object to complying in law as well, since the difference will not affect its operations.

In the case of ANSTO the position is complicated by the obvious national security aspect of Australia's nuclear research capability, which underpins the argument for immunity from State laws . . . The Committee accepts this argument, but with a caution. In a liberal democracy, while national security remains paramount, it must also compete with other interests.

It went on to say:

Part of the problem is that ANSTO combines research and advice functions which may involve the national interest, as well as commercial activities in which, arguably, it deserves no advantage over private enterprise.

The Committee accepts the 'national interest' argument but does not consider it satisfactory that ANSTO's waste or commercial operations are exempt from controls that apply Wednesday, 9 December 1998 SENATE P1029 to its private sector competitors. The Committee believes that this is not an area where self-regulation is appropriate.

It goes on to then recommend the creation of a Commonwealth regulatory body independent of ANSTO to ensure that this area is covered.

One key feature of the legislation before the Senate is that it establishes a new agency—the Australian Radiation Protection and Nuclear Safety Agency, ARPANSA—to oversee all the regulatory aspects with respect to Commonwealth facilities and Commonwealth employees. The agency will operate within the Department of Health and Aged Care.

Further, the legislation provides for the appointment of the Chief Executive Officer of ARPANSA. The functions of the chief executive officer are outlined in clause 14 of the bill. Those functions include: to promote uniformity of radiation protection and nuclear safety policy and practices across jurisdictions of the Commonwealth, the states and the territories; to provide advice on radiation protection, nuclear safety and related issues; to undertake research in relation to radiation protection, nuclear safety and medical exposures to radiation; to provide services relating to radiation protection, nuclear safety and medical exposures to radiation; to accredit persons with technical expertise for the purposes of this act; and such other functions as are conferred by this act, the regulations or any other law.

Most importantly, one of the key features of the legislation is that it establishes a licensing system for regulating nuclear facilities, nuclear installations and sources of ionising and non-ionising radiation. Two other bodies will be established to support the Radiation Health and Safety Advisory Council: a radiation health committee and a nuclear safety committee.

Whilst we do support the legislation, we have raised in debate in the other place, both when it occurred earlier this year and since the election, a number of concerns with the legislation. In particular we raised our concern that there was not sufficient recognition of the rights of community groups and particularly local governments. They should be given a greater opportunity to be involved in the decision-making processes of the ARPANSA.

We are pleased to acknowledge that the government has strengthened the bill since it introduced it earlier this year by including provision for local government to be represented on the Nuclear Safety Committee. That is a very important issue for the community of the Sutherland Shire, where the Lucas Heights facility is located. As honourable senators know, that is where I happen to reside. So I am quite conscious of the views of the Sutherland Shire Council and of the broader community in this regard.

Page 6 of the majority report of the Senate Community Affairs Legislation Committee notes that the government will be bringing forward amendments to the legislation to deal with many of the issues that we raised, that other groups have raised, and that other representatives in the Senate have raised. They include: ensuring that the chief executive officer must have regard to the application of world's best practice when issuing licences; ensuring that the minister and the chief executive officer consider nominations from consumer environmental groups before making appointments to the committees; and amending the definition of 'nuclear installation' by deleting the references to nuclear power reactors and reprocessing facilities. We understand it is the case that Australia has no intention of building a nuclear power facility, and as such it should not be referred to within that section of the act. The bill also will distinguish between medium scale facilities such as a reactor or a waste storage facility—they will be called 'nuclear installations'—and small scale facilities, which might be dubbed 'prescribed facilities'.

There is one area where we disagree with the government on this legislation. The opposition intends to move an amendment to provide that, prior to any issuing of a licence by the chief executive officer for the construction of a nuclear installation—we have in mind the new Lucas Heights reactor or a new reactor at any other location in Australia—there must be either an independent inquiry or a public inquiry held pursuant to the provisions of the environment protection legislation. We would ask that the government give further consideration to accepting our amendment in that regard. When we get to the committee stage we will be arguing that there are very good reasons as to why that process should occur prior to a licence being issued.

We do not build nuclear reactors in this country every day of the week or even every year. It is 40 years since the first reactor was built at Lucas Heights. The government has made a decision to replace that reactor with another reactor. There is a lot of concern about that decision in the community. There are very good reasons why it should firstly be determined whether we need another reactor in this country. If it were demonstrated that there were issues as to where it should be located, those issues should be properly addressed in a public forum such as a public inquiry. There is great dissatisfaction and concern being expressed with the current EIS process that is under way in that regard.

With those remarks, I would indicate that we support the legislation in principle, but at the committee stage we will be pursuing our amendments and will listen with interest to the other contributions made in the debate.

**Senator MARGETTS** (Western Australia) (11.20 a.m.)—Before I begin debate on the specific provisions contained in this bill, I do feel it is important to restate the Green's total opposition to the nuclear fuel cycle. Despite all the claims to the contrary, the reality is that nuclear material is inherently dangerous and remains so for many years—hundreds of thousands of years in some cases.

I have just returned from Melbourne where two important conferences took place on the weekend. The first one, which I attended, was the international congress of the International Physicians for the Prevention of Nuclear War. The second was a national meeting to establish a coalition of anti-nuclear groups to campaign against uranium mining, a nuclear reactor and a national radioactive waste dump.

In an international context, recent events, such as the nuclear tests by India and Pakistan, have confirmed that the existing nuclear disarmament and non-proliferation regime has failed. One of the key problems in that regard is the total failure by the five nuclear weapons states to commit to a timetable for nuclear weapons disarmament. That failure contributed directly to the recent tests in India and Pakistan and remains a stumbling block to real nuclear disarmament.

It is also important to note that the Nuclear Non-Proliferation Treaty is based on a fundamentally flawed premise: that it is possible to prevent the proliferation of nuclear weapons by providing non-nuclear weapon states with so-called 'peaceful' nuclear technology. This flawed argument has been highlighted by people such as Elizabeth Clegg from the Centre of Defence Studies at the University of Aberdeen. In an article entitled 'Building the bomb: how states go nuclear', to which I have referred previously in this place, she stated:

In conclusion, then, it can be seen that the infrastructure required for the development of a nuclear weapons potential is best created under cover of a well established civilian nuclear industry; in all of the above cases the military option was made possible by the existence of a civilian programme.

Whilst opposing the involvement of the Australian government in the nuclear fuel cycle, the unfortunate reality is that we do have a nuclear reactor and nuclear waste in this country, and proper independent regulation is required.

The introduction of this legislation which provides for the protection of the Australian community from the adverse effects of radiation and for the safety of Australians who deal with radioactive materials is, therefore, extremely important. We know that a number of people have been asking for it for some time. It is too important to be allowed to go through parliament without the Australian community having had the opportunity to register its concerns about the regulatory regime on which we will have to rely to protect us from hazards which have the potential to remain with us for an indefinite period of time.

It was for that reason I pushed for a committee hearing on these bills. As predicted, a range of concerns were expressed by community representatives. Many of these concerns had the potential to be addressed by way of amendment to the legislation. And the hearing has clarified the issues, providing a way forward to strengthen the protection provided by the bill.

A number of community groups expressed concern about how much of the framework of these nuclear regulations is to be contained in regulation rather than in the legislation itself. The government, however, is to be commended for going some way towards meeting those concerns, and particularly for allowing a period of open public consultation on the regulations which are so important to the effective functioning of ARPANSA as a regulating body.

One of the key concerns raised by several parties to the hearing and others who made written submission is the fundamental issue of whether there is such a thing as a 'safe' level of exposure to radiation. It is my view and the view shared by many that there is no safe level of exposure, and to legislate to allow any increase in the radiation to which Australians are exposed is fundamentally flawed.

Even following the presentations by ARPANSA and ANSTO, concern remains about the 'allowable' exposure to radiation. A particular concern is the power of the CEO to grant exemptions which could see workers exposed to higher doses of radiation than otherwise allowed. The aim should be to have exposure as close to zero as is technically possible, and there should not be power to grant exemptions over people's lives.

The standard in the legislation purports to be world's best practice. While this should mean 'as low as technically achievable'—that is the ALATA principle—the standard in this legislation is set at 'as low as reasonably achievable', and that takes in the dollars and cents. If this is world's best practice, it is not good enough, especially when we know that better standards are achievable elsewhere. 'World's best practice' does not mean the best practice in the world; it obviously means something quite different by way of compromise.

We believe that world's best practice does not and should not equate to international atomic energy acceptable levels, the International Atomic Energy Agency in many ways being both a regulator and a proponent of nuclear technology. Standards are constantly under review and technological developments are taking place. But best practice in the nuclear industry is constrained by economic forces, which should not be the primary concern in a bill to protect Australians from radiation and provide for nuclear safety.

The precautionary principle must be the most important consideration where nuclear health and safety issues are concerned. For this reason we will seek to delete the threat of imprisonment for ARPANSA inspectors making a false or misleading statement or warrant. Criminal law should quite adequately deal with criminal fraud, should that be a problem. Threats of imprisonment—and we are talking about a maximum of two years imprisonment—in this way in this legislation could be seen as intimidatory and not necessarily in the best interests of the community and, could I say, quite out of proportion to the kind of real, enforceable legislation and regulations on the industry itself. Despite our stated problems with the use of the term 'world's best practice', the inclusion of a requirement for the CEO to have regard to world's best practice when issuing licences is an improvement in the current bill.

For the regulatory authority set up under this legislation to have the confidence of the Australian community, it must clearly be independent of the government of the day and be responsible to parliament. The regulatory authority, the Chief Executive Officer of the Australian Radiation Protection and Nuclear Safety Agency, falls some way short of this standard because it is not an independent statutory authority. We are pleased, however, to see that the government has now agreed that the CEO have direct power over the staffing of ARPANSA—but still it Wednesday, 9 December 1998 SENATE P1031 falls a long way short of being an independent statutory authority.

The recommendation to exclude nuclear power reactors from the legislation is an improvement in accountability. The Greens, however, are concerned that licences for a nuclear fuel fabrication plant, an enrichment facility, a fuel storage facility and a reprocessing facility remain possible under this legislation, albeit with the approval of the CEO. These activities should either be specifically prohibited under this legislation or, at the least, should not be able to take place without full and separate parliamentary scrutiny.

Over the last couple of weeks, we have heard some quite extraordinary information from the United States about other countries wanting Australia to take their nuclear waste, their nuclear junk. We have to be very, very aware, when launching into a bill like this, of exactly what it is that we as a parliament are giving the tick to, albeit perhaps with the authority of the licensing authority of the chief executive officer of a body which is not quite independent of the government.

When there are financial pressures and the pressure of international scrutiny, we know that in the end arguments such as, 'Australia would be very responsible in this current disarmament regime to take other people's core waste from nuclear reactors' and 'You've got the best conditions, a nice stable economy and you're going to make a lot of money

out it,' will be convincing to a growing number of people, perhaps particularly those on the more conservative side of politics.

We believe separate approval should be obtained for any other new facility, such as a spent fuel conditioning plant, a nuclear waste disposal facility, a waste storage facility or an isotope production facility. It should be noted, however, that any proposal for such a facility would itself be of great concern to the Greens. If our concerns regarding scrutiny of any proposal for any new nuclear facility are not satisfactorily addressed, we will seek to amend the definition of nuclear installation by deleting reference to any nuclear installation which does not currently exist.

Major nuclear installations require much greater prior scrutiny than is envisaged in the bill. In particular, there must be a comprehensive public inquiry into, and parliamentary scrutiny of, the question of whether there is a need for the installation before the process even gets to the stage of an impact statement or an inquiry into the proposal itself. No licence proposal should be considered until a public, open inquiry into the need for the installation and an impact assessment process have been completed. An amendment to achieve that end will be moved in the committee stage of this bill.

Those people who think that these things are done as a matter of course should speak to the people living around Australia's only current research reactor at Lucas Heights. They will tell you what the culture of secrecy is in relation to the nuclear industry in Australia. There were a number of delegates from the former Soviet Union at the IPPNW conference at the weekend. There has been so much secrecy involved in the nuclear issues in the Soviet Union—as we knew—that, ironically, we now seem to have more information from the former Soviet Union about the issues of nuclear proliferation, nuclear materials and the problems of dealing with those than we do from the United States, the UK and, indeed, from Australia.

The proposed government amendment to give public notice of the licensing of a nuclear installation is grossly inadequate. The whole process must be open to public participation, and this should be reflected in the regulations. There is no reference in this bill to the regulation or setting of standards in the uranium mining industry, yet codes of practice in the industry were covered by the Environment Protection (Nuclear Codes) Act, which is repealed by a consequential amendments bill. It is desirable for the Commonwealth to have oversight of such standards and for there to be an open, public process for the ongoing development and improvement of the codes, and this bill is silent on this question. Even the Senate Select Committee on Uranium Mining and Milling looked at the lack of oversight in relation to this industry. We commend the government for clarifying the situation regarding existing codes and development of improved codes by agreeing to have the current requirements of the Environment Protection (Nuclear Codes) Act included in the regulations.

The only role for the community in this bill is a purely advisory one and, even there, it is a role severely constrained by the legislation. A further amendment is required for protection from prosecution for committee or council members who make public any information or concerns that they may have about radiation protection or nuclear safety. There is no point in us moving towards some kind of whistle-blower legislation if we put a gagging mechanism in legislation that prevents responsible members of the community being able to canvass with their community some of the issues of health and safety that they are asked to deal with. Otherwise, these advisory committees merely pick out the best and most able people within the community and disarm them—if you can excuse the pun. They literally gag them by taking them out of the process, keeping them busy running around in circles and making them unable to communicate with their own representative constituency.

The Greens (WA) commend the introduction of the conflict of interest provisions for committee and council members in the regulations, and we would like to see that extended to include a register of financial interests. There is a clear need for the strengthening of reporting requirements throughout the bill. We are particularly concerned that the CEO's functions include the monitoring and reporting on the operations of the agency and its advisory bodies, and it is pleasing to see that the government will be moving appropriate amendments in this regard.

There has been a lot of work, a lot concern about the community and some movement on this bill. If this bill had been shoved through at the end of the June sittings, as the government proposed to do, we would have had none of these changes. It was proposed that the bill be coughed through at a lunchtime without debate and divisions, and that of course meant without time for amendments and consultation. We were advised at the time that the community had plenty of time. We, in fact, were told by the community that that was simply not true. The Greens (WA) had a great deal of pressure put on them at that time because we were told by the government that we were the only ones holding back this fabulous piece of legislation. Quite frankly, the legislation has been shown to be less than fabulous.

Although, as I have conceded, the concept of ARPANSA has been asked for by a number of groups over quite a deal of time, it was not a case of 'any regulations at all you are prepared to throw at us.' The community were tired of being treated badly, of being kept in the dark and of not having some kind of independent authority as an oversight of the industry. That certainly did not mean that they wanted to go backwards. It certainly did not mean that they wanted commercial pressures in the end to come through and override them—steamroller them—by way of this legislation.

Our concern—and there are still some concerns remaining which we will deal with in the committee stage—is that this bill will end up being a Trojan Horse: something that looked attractive; something that was in the guise of a proposal that the community wanted, but something that contained elements much more problematical; something that could lead to other areas of concern where the parliament would then have no scrutiny or no redress. We had a situation where, in the hands of a CEO who would be responsible to the minister and whose staff at that stage would have been selected from ministerial staff, ticks could be given to activities which in no way the community would be happy to have outside parliamentary and public scrutiny.

So this bill has been problematical. I don't think it is perfect and I don't think it is going to get anywhere near perfect, but I am happy that we have had at least some chance in the last few months to move some-what closer to some level of public health and safety. There is still a long way to go.

In summary, whilst the Greens (WA) are pleased that the government has made some concessions to acknowledge community concerns about this bill, we feel that further amendments are required to ensure adequate protection for the community from the dangers of radiation and of nuclear activities.

**Senator STOTT DESPOJA** (South Australia— Deputy Leader of the Australian Democrats) (11.39 a.m.)—I rise on behalf of the Australian Democrats to support in principle the Australian Radiation Protection and Nuclear Safety Bill 1998. The Australian Democrats recognise the importance of protecting the Australian community from the adverse effects of radiation. We believe that people who work with radioactive materials deserve a rigorous and comprehensive regulatory system to ensure that they are not exposed to any unnecessary dangers associated with radiation.

I oppose generally, and my party generally opposes, the use of radioactive materials in places where there may be a risk. Basically we believe that there are no safe levels of radioactivity. As we know—I assume all in this chamber know—radioactivity can cause harm. I would like to see a blanket ban on radioactive materials and other toxic materials everywhere. Internationally there is a recognition that radioactivity is unsafe at every level and that there is no safe dose. The recent UK National Radiological Protection Board describes in recent studies of low dose radiation and health effects that one hit of radiation is enough to cause cell damage, and this of course can lead to cancer. This is enforced by a recent report in the *New Scientist* magazine which reports on the work of the Medical Research Council on cell damage from low dose radiation.

Perhaps even more importantly, this is an issue that we believe has been left out of the government's and the opposition's reckoning on radioactivity: radiation causes cell damage as well as hereditary damage. This hereditary damage cannot be measured using ordinary techniques and, therefore, continues to remain outside the reporting of most studies and most regulated reporting requirements. Certainly, the Democrats share some of the health concerns that have been raised in this chamber today, in particular some of the concerns raised by the Greens (WA) about what is considered an acceptable dose of radiation as well as the possibilities of the CEO granting exemptions in relation to acceptable doses.

This concern about radioactivity underpinned many of our proposed amendments to the recent Space Activities Bill 1998. In regard to that legislation we sought not to prevent radioactive materials being launched into space, although we would have preferred a blanket ban, but to prevent radioactive and toxic materials being launched into space without a hazard and a risk assessment prepared by or organised by the minister. So we have an ongoing concern in this area.

We believe that the community has a right to be involved with any major developments in the way we regulate the use of radioactive terms in workplaces and in industries. This issue is far too important just to leave to governments, bureaucrats and experts without the full consultation of the community and their involvement.

The community will have to rely on this new legislative framework for protection against the harmful effects of radioactive material for an indefinite period of time, potentially quite a long time, into the future. Therefore, it is particularly important that we get this right now. I echo again my statements from last week's debate on the Space Activities Bill 1998, where we sought to regulate commercial activities in space. It was an important piece of framework legislation and it should have been done— indeed, we attempted to do it—correctly. It is the same in this case. It is important that we get this legislation right, now that we have the opportunity.

The Democrats are also aware of the many concerns raised by community groups and consumer groups during the committee's inquiry into this bill. I am pleased to note that the government has attempted to address some of these concerns, including allowing a period of public consultation on the regulations to the bill. We support this process. We believe it will allow for greater community input into the way this new regulatory regime will function.

The Democrats recognise that radiation is used in a variety of fields, including archaeology, medicine and the construction industry. Other applications include defence, the food industry—that is, the sterilisation of food—and scientific research. In particular, we acknowledge the responsibility of the Commonwealth government to protect the

estimated 3,500 Commonwealth workers who utilise radiation in their work. These include people working across a range of difficult fields, such as customs, the postal service, defence, medical and dental practitioners, telecommunications, the Department of Foreign Affairs and Trade, the Australian Maritime Safety Authority and the CSIRO.

The Democrats acknowledge that the current regulatory regime does not adequately protect these workers from any potential harm associated with radiation exposure through their work. The existing laws controlling exposure to radiation in Australia come from a mismatched system of Commonwealth, state and territory legislation which does not necessarily provide comprehensive coverage

Senator Forshaw referred in his comments in the second reading debate to the report of the Senate Select Committee on the Dangers of Radioactive Waste entitled *No time to waste* and the Democrats support recommendations 7 and 8 of that 1996 report. This report identified that while radiation exposure was covered by state laws, a regulatory gap persisted because these laws often did not apply to the Commonwealth or to Commonwealth employees. We understand that this bill addresses recommendations 7 and 8 of the *No time to waste* report, which called for the development of a nationally agreed regulatory scheme for the regulation of the use of radiation.

The Democrats understand that Australia is contemplating signing the International Atomic Energy Agency's Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management 1997. This convention requires, among other things, each contracting party to establish a legislative and regulatory framework to govern the safety of spent fuel and radioactive waste management. Article 19 of the convention requires national safety requirements and regulations to be in place and a system of licensing of spent fuel and radioactive waste management activities to be adopted with appropriate inspections and enforcement of the regime. The Democrats would support Australia signing this convention and taking a leadership role in the management of radioactive waste.

Most people in this chamber—certainly Senator Margetts has referred to it and I have no doubt that our environment spokesperson, Senator Lyn Allison, will as well—were extremely disturbed to see the promotional video produced by Pangea Resources, which states that Australia would be the best country to store much of the world's high level nuclear waste. The company assert that they have met—and I acknowledge that these are the company's assertions—with Australia's ministers and officials about their plans for a nuclear waste dump in Australia.

*Senator Margetts interjecting—*

**Senator STOTT DESPOJA**—I acknowledge the interjection from Senator Margetts that they have met with Western Australian ministers. In question time the Democrats pursued this issue. We asked the Minister for Industry, Science and Resources whether or not he agreed with this claim that Australia is the best place to store high level nuclear waste. We also asked him to rule out completely any involvement of this government in setting up an international nuclear waste depository in Australia. I was pleased that the minister stated unequivocally that:

... no high level radioactive waste facility is planned for Australia and the government has absolutely no intention of accepting the radioactive waste of other countries.

The minister went on to state that the government policy in this area is:

... clear and absolute and will not be changed. We will not be accepting radioactive waste from other countries ... it will not be government policy to accept radioactive waste from other countries nor to accept high level radioactive waste.

We are very pleased to hear that. On the basis of this, the Democrats seek to enshrine this commitment in legislation in order to protect the community from the harms associated with any commercial nuclear waste disposal facility.

We are also committed to restoring faith in the government in the parliamentary process. As part of this commitment, we are opposed to political partisan appointments in any field. My colleague Senator Andrew Murray has previously brought to the attention of the Senate the matter of the Nolan committee from the United Kingdom. Finally—it has taken a while—even that class rigid society has got sick of the ministerial patronage that went on there. Through the Nolan committee, it has recommended a wholesale review and overhaul of the system of ministerial patronage and has advanced a transparent, accountable and open appointment system.

We have sought to do this on a number of occasions with a number of bills. I think Senator Murray last moved these amendments in relation to the wheat marketing board. Individuals and organisations, together with other constituencies, often express to us their fear of dominance or capture by partisan or particular interests when governments have had a hand in any kind of board, authority or organisation where people are appointed to manage it. That fear is regardless of what political party is in power.

As senators will have noted, the amendments of the Democrats will address the matter of appointments of members to the council and set out the general principles whereby those members would be appointed. Frankly, we should not have

to do that in legislation, but the history of this country seems to be no different from any other country where people have had the power to appoint others either on the basis of nepotism, the basis of mateship or the basis of conferring a benefit. Whatever happens, that is a partisan way to approach things. We believe it is an unacceptable way, and our amendments seek to redress that.

It is my belief and that of my party that it is in the interests of all Australians of any political persuasion to accept that a system of transparent appointment on principles and merit, independent scrutiny, probity, openness and transparency would be to the benefit of any organisation, including the one we are discussing today. I will be attending to that area of interest when the bill comes before the committee for debate.

The Democrats believe that the CEO of ARPANSA should be able to hire staff independently of the Department of Health and Aged Care. This is necessary to ensure that ARPANSA can function as a truly independent body. We will move an amendment that allows the CEO of ARPANSA a greater degree of independence than is currently allowed under the bill.

I understand that the government amendments have just been circulated. I was not sure what stage we were up to with government amendments, but certainly we have made it clear that we will support government amendments that make explicit the obligations of ARPANSA to comply with any agreements made by Australia in relation to the safe conduct of radiation and nuclear activities and the adoption of standards, codes and best practice, that reference the functions and composition of the Radiation Health and Safety Advisory Council and supporting committees, and that require a community representative to be included on the Radiation Health and Safety Advisory Committee, the Radiation Health Committee and the Nuclear Safety Committee.

The Democrats will be supporting the opposition amendment which would require public consultation to take place before a new nuclear installation could be licensed. We agree to the need for community consultation. We also agree that there should be a legislative requirement, and we fully support that amendment.

The Democrats will also be supporting Greens amendments which bring greater accountability to the bill and which ensure that the community will have more substantial involvement in any future regulatory developments. In particular, we support the amendments which restrict the application of the bill by excluding major nuclear installations. We believe this is vital to ensure that the government of the day cannot instigate a major nuclear facility without full community consultation.

We will also support the amendments relating to increased reporting requirements to ensure that the public is kept fully informed of any problems arising with this new regulatory regime. Those amendments that we will be supporting, those amendments that we will be moving, are aimed towards ensuring greater accountability and transparency in the bill.

We have also put on record our concerns about doses of radiation. I made it a point at the committee hearings to ask nearly all the witnesses what they considered was an acceptable dose of radiation—if there was such a thing—or what was the low level dose that people could be subject to without too many risks. It was interesting to hear the variety of opinions from councils which said that there was no acceptable level right through to various discussions from ANSTO and ARPANSA representatives.

I draw the attention of the chamber to a document produced by Jean McSorley, whom I am sure we are all familiar with for her work in investigating issues of radioactivity and nuclear materials, specifically looking at the environmental impact of those materials as well as looking to prevent members of the community being subject to such materials. She quotes from a UN paper examining the problem of low dose radiation. She believes that it challenges the notion of negligible harm. She says:

Radiation, by its very nature, is harmful to life. At low doses it can start off only partially understood chains of events which lead to cancer or genetic damage. At high doses it can kill cells, damage organs and cause rapid death.

She goes on to question aspects of Lucas Heights, particularly the proposed environmental impact statement, and whether it is possible to measure the health impact of radiation exposure at Lucas Heights. She then goes on to talk about the objectives of the ARPANSA bill in relation to protecting people from the harmful effects of radiation. Her concerns are as follows:

Harmful is not defined in the bill. However, it would not be unreasonable to suggest that what is meant by 'harmful' in this situation is perceived as the most manifest effects of radiation, certainly the most damaging that is—early deaths through cancer and insignificant numbers. As with the terms 'as low as reasonably achievable' or 'acceptable dose limits', the word 'harmful' in this context raises many questions. Certainly, if it is taken as that suggested, it does not convey the full effects that radiation can have on a single person or across a given population.

She goes on to talk about the fact that there is no safe dose of radiation.

The Democrats and I subscribe to that view. We do oppose generally the use of radioactive materials in places where there may be a risk. That is why we are particularly concerned about issues such as nuclear materials and radioactive materials being made available in the community, whether they are on earth or being launched into space. We will continue to maintain our attempts in this area to make sure that, hopefully, one day we will see a blanket ban on some of these radioactive materials, although recognising there may be some exceptional circumstances in that they may be used for the purposes of health. But we will continue to pursue matters such as these in the Senate as well as ensuring accountability and greater transparency in bills such as these.

**Senator ALLISON** (Victoria) (11.55 a.m.)—This package of legislation provides for the protection of the Australian community from the adverse effects of radiation and for the safety of Australians who deal with radioactive materials. As my colleague Senator Stott Despoja said, a key concern raised by several parties to the hearing and those who made written submissions is that fundamental issue of whether or not there is such a thing as a safe level of exposure to radiation. That leads me to discuss a very topical and important matter—that is, the proposal for a nuclear waste dump in Australia.

Some years ago, as I recall, Australia did a study into the suitability of this country in terms of its geology and its demographics and declared that basically 75 per cent of Australia was suitable to store waste—the rationale being that if it was far enough away from population centres and in a stable geo-graphic area, then it was okay for nuclear waste. I recall saying at the time that this was a very dangerous message to send to the rest of the world. By saying that we were not going to accept nuclear waste from overseas but indicating that so much of Australia would be suitable to do so seemed to many of us at the time to be extremely dangerous and extremely unwise.

This week we are being told that, in the interests of a secure world, Australia should accept waste that might otherwise find its way into the laboratories of terrorists and unfriendly nations to create nuclear weapons. How much work has already been done on this proposal away from any sort of public scrutiny is anyone's guess. But the leaking of a promotional video last week made by Pangea Resources blew the lid on what appears to be a two-year campaign. This Seattle based company wants to create a dump in the outback of either South Australia or Western Australia.

Its representatives claim that they have discussed this with Australian ministers and bureaucrats. We do not know who exactly. Senator Minchin has already denied any knowledge of meetings at a ministerial level. Senator Margetts says today that the Court government has had meetings. It is a very intriguing convergence of events. We have Pangea's campaign and, at the same time, something of a boost from the Clinton administration. The message that Australia needs a dump has come from no less a figure than President Clinton's special envoy on weapons of mass destruction, Robert Gallucci. He has maintained that Australia would be making the world a safer place if it accepted the world's nuclear waste and plutonium. But the reasons he chose to single out Australia are perhaps more complex than any sort of idea that we might be a model nuclear citizen.

Mr Gallucci admitted on the ABC just this morning that the US has produced much of the world's spent nuclear fuel. It just so happens that the United States government has an enormous problem in deciding what to do with this fuel. It made a commitment in 1982 to acquire and to store all spent nuclear fuel from commercial plants. The deadline for starting this acquisition was January this year, but nothing has happened because a storage facility has not yet been agreed upon. It is quite understandable that the utilities are very angry about having to pay millions, if not billions, of dollars for temporary storage while the US government tries to make up its mind. This adds to the pressure on Australia.

In 1987, Congress amended the Nuclear Waste Policy Act, nominating the Yucca Mountain in Nevada as the only site to be considered for a permanent waste facility. However, Nevada politicians, public and scientists opposed this. They say that that mountain has the potential for earthquakes, volcanic activity and underground flooding. A draft environmental impact statement is due in the middle of next year. Both the Senate and the House have passed legislation to create a temporary storage facility there, but President Clinton has threatened to veto this.

The US has started a \$2 billion program to dispose of 50 tonnes of excess plutonium, some of this produced in the dismantling of nuclear weapons. So the US has a lot of nuclear waste, a lot of plutonium, and no place to put it. The American public will not buy the idea that radioactive material is safe. And, instead of more encouragement of renewable energy, the response, it seems, has been to look for a docile country like Australia.

Mr Gallucci basically admitted that the choice of Australia was motivated not so much by geology as by political fallout. He said, 'I don't know enough about the geology of the United States,' when he was asked by the ABC why a dump could not be sited there. Of course, the 'political fallout' that he refers to is the very real risk of public exposure to radioactive material. I think that Australians should be very wary about taking advice from someone who admits to ignorance about the United States' geology, yet professes to know all about Australia's. Mr Gallucci went on to say:

If you ask me if this—

referring to the dump—

is possible in the United States, I would tell you that politically I doubt it would be possible.

Special Envoy Gallucci's remarks, I think, show a great deal of naivety about Australia. The message is basically that we should accept a dump because we here are not as politically organised or as aware as Americans. I think this is not just naive, it is also very insulting. Australia has not gone down this path of nuclear energy or nuclear weaponry, and a key reason for our caution on the nuclear industry has been in the past—and it remains today—the health of those people who would be exposed to radioactive material.

Mr Gallucci said an Australian dump would address 'the needs of so many countries who don't have the geology for the long-term storage of spent nuclear fuel or radioactive waste'. The question that must be asked is: why are these geologically unstable countries actually encouraging proliferation of nuclear power without providing for safe and long-term waste storage? And I use that word 'storage' advisedly. We are not talking about disposal; it is storage. We do not know what to do with nuclear waste material.

Simply by housing a dump, Australia will not solve the problems associated with countries refusing to take responsibility for their own nuclear waste. The United States has one of the poorest safety records in the world when it comes to operating nuclear power plants. This is not just a not-in-my-backyard principle. Australia should not become a dumping ground for what has now amassed as 148,000 tonnes of the world's high-level nuclear waste, any more than it ought to become a dumping ground for the world's dioxins or DDT.

Moreover, a dump that begins as a small facility can very easily be made larger, and this phenomenon too can be demonstrated overseas—it is very much a case of 'out of sight, out of mind' when we are talking about the very large area of Australia which is only very lightly populated. Nor is it improbable that a dump that initially accepted only domestic waste might further down the track take international waste.

There has been longstanding cooperation between the United States and Australia in nuclear matters. An American company has been brought into the Maralinga area to vitrify radioactive waste in situ. This year, the United States announced it would be using an Australian technology, Synroc, to immobilise plutonium. This may make quite compelling any arguments about whether Australia should accept high-level waste from the US and other countries—if it so safe, why doesn't its country of origin take it back for storage? I guess another argument is: if Australia continues to dig up uranium and continues to open uranium mines, such as Jabiluka, what sort of message does that send to the rest of the world about responsibilities for the waste that has been created?

Senator Minchin told the Senate yesterday that a preferred site for a national waste repository would be nominated by the middle of next year. The senator said that such a repository would be 'good for South Australia'. He ruled out accepting waste from over-seas—at least for now. Perhaps he is waiting for national opinion to be tested by the likes of the Institute of Public Affairs. Lo and behold, in the *Herald Sun* last Saturday, IPA executive director Mike Nahan recommended Australia should consider taking overseas waste. He argued that nuclear power is here to stay. This argument is morally equivalent to the argument that poverty, AIDS and despotic governments are here to stay and, therefore, there is no reason to do anything about them. The fact is that the nuclear industry is inherently unsafe. The waste is deadly and, at present, poorly handled in most places in the world. We argue that vested interests should not be allowed to prevail over the health of future generations and over our environment.

In any case, there have been no nuclear plants commissioned in the United States since 1978, and more than 100 planned reactors have now been cancelled. Nahan said in the article that 'permanent disposal is needed and the best locations are sites remote from people'. Further on in the story he said that a dump 'would also probably need to be located on Aborigines' land which would require their permission'. A dump on Aboriginal land cannot by definition be remote from people. It seems that Nahan made an unconscious slip here, a slip that has the unmistakable ring of terra nullius to it.

The Democrats are urging the Prime Minister to write to President Clinton expressing dissatisfaction with Mr Gallucci's remarks. Any United States pressure on Australia to carry the can for America's unsafe nuclear industry is unwelcome, and we ought to say so to the President. Despite Senator Minchin's comments to the contrary, there is no doubt that the campaign for Australia to take on the world's nuclear burdens has really only just begun. As we open up more and more uranium mines, that campaign will gather momentum.

This bill puts in place some protections for people who work with radioactive material, and we support that. But it will not protect us from the rest of the world seeing Australia as a convenient dumping ground for them. On behalf of my colleagues, I give the Senate notice that the Democrats will be working on that much greater—and, in many ways, more important—level of protection from becoming the world's nuclear waste dump.

**Senator TAMBLING** (Northern Territory—Parliamentary Secretary to the Minister for Health and Aged Care) (12.08 p.m.)—I thank senators for their contributions to this debate on the Australian Radiation Protection and Nuclear Safety

Bill 1998 and two associated bills, and in particular I thank those senators who participated in the Senate Community Affairs Legislation Committee inquiry. The report of the committee—authored by the committee chair, Senator Sue Knowles—was based on a number of submissions received in public hearings and has previously been made available to all senators. It gave us good advice and raised issues that have been addressed. I think most of the points that have been raised in debate today by the various speakers have at different stages been taken into account in the deliberations on this important piece of legislation.

The need for the Australian Radiation Protection and Nuclear Safety Agency as an independent regulator of Commonwealth radiation and nuclear activities is undisputed. This series of bills ensures for the first time comprehensive national regulatory oversight of radiation sources, apparatus including cyclotrons and irradiators, and, importantly, nuclear installations. The bills have been subject to intense scrutiny. They have been the subject of considerable debate by a range of interested groups including environmental groups, local government, state and territory agencies, and industry.

The Senate Community Affairs Legislation Committee inquiry that I referred to into the scope and contents of the bill earlier this week has confirmed bipartisan support for this legislation. I welcome Senator Forshaw's comments that the Labor Party intend to support the legislation. That process has also identified some aspects of the legislation which can be further improved, and the government proposes to move some amendments to the Australian Radiation Protection and Nuclear Safety Bill 1998. In summary, the amendments ensure that the CEO of ARPANSA has regard to world's best practice; that consumer and environmental groups are invited to provide nominations in respect of membership of the Radiation Health and Safety Advisory Council and supporting committees; that the CEO will monitor and report to parliament on the operations of ARPANSA, the council and committees; and that the definition of 'nuclear installation' is clarified to exclude nuclear power reactors or nuclear reprocessing facilities and to include facilities such as nuclear waste storage and disposal facilities.

The Senate committee report has also recommended that the regulations developed under this bill be subject to community consultation over the next two months. The government is committed to ensuring extensive consultation involving community, environmental, scientific and other interested parties. We are confident that this will result in strong and effective regulations. While the consultation process will no doubt identify areas where regulations can be enhanced, the government will ensure that the matters referenced by the community affairs committee are addressed in the regulations. These matters include requiring that, before making licensing decisions in respect of nuclear installations or prescribed radiation facilities, the CEO publish a notice that an application for licensing has been received.

In the case of licensing decisions in relation to nuclear facilities under clause 31, the regulations will require: that the CEO take into account matters raised in any public submissions received and include in a report to parliament both the matters that were raised by public submissions and the basis for the CEO's licensing decisions; mechanisms for developing and ensuring codes previously developed under the Environment Protection (Nuclear Codes) Act 1978; and the CEO to list new and existing licences in the quarterly report to parliament, addressing any conflicts of interest.

I note that several of the speakers, particularly from the Democrats and the Greens, seem to be preoccupied on this matter of nuclear waste. I am surprised, given the comments that were made in this parliament by both Senator Hill and Senator Minchin on 1 December, that they still hold those apprehensions and fears. It would be interesting to note the bedtime reading of the Greens and the Democrats—it would probably be rather scary. Let me put into the record again the comments that were made on 1 December.

The Democrats leader, Senator Lees, specifically addressed the issue that both Senator Stott Despoja and Senator Allison have raised this morning. I do not think it can be any clearer put than the answer that Senator Minchin gave when he said: In relation to the press reports this morning—that is, 1 December—

I can confirm that as far as this government is concerned there have been absolutely no ministerial level discussions with that company, Pangea Resources. I am advised that representatives of Pangea have had discussions with government officials over the years—I think going back before we came into government—on the general issue of radioactive waste management, but those discussions have always been clearly on the premise that it is not government policy and will not be government policy to accept radioactive waste from other countries nor to accept high level radioactive waste.

Senator Hill made this point in answer to a question on the same day from Senator Margetts: I am sure the Minister for Foreign Affairs would say that the government is under no pressure; furthermore, it is not intending to build a facility for the disposal of high-level nuclear waste. It is important to recognise that this legislation separates the regulatory aspects of this important issue from policy and certainly ensures the integrity of ARPANSA.

Question resolved in the affirmative.

Bills read a second time.

## In Committee

### AUSTRALIAN RADIATION PROTECTION AND NUCLEAR SAFETY BILL 1998

The bill.

**Senator TAMBLING** (Northern Territory— Parliamentary Secretary to the Minister for Health and Aged Care) (12.16 p.m.)—I table the supplementary explanatory memorandum relating to the government amendments to be moved to this bill. This memorandum was circulated in the chamber on 9 December 1998

**Senator FORSHAW** (New South Wales) (12.17 p.m.)—We have a running sheet which, I am advised, indicates that the first proposal to be considered in committee is that from the WA Greens regarding clauses 7 and 8. We are opposing it. I thought they might at least like the opportunity to move it.

**The TEMPORARY CHAIRMAN (Senator Calvert)**—I understand that we can call the government amendment on first—that is government amendment No. 1 on the running sheet—while we are waiting for the Greens senator to come.

**Senator FORSHAW**—That is an interesting proposal, because there are some even greater complications with this amendment than the first one. I am happy to proceed with that course. However, there are proposed amendments that relate to this issue, which is the definition of ‘nuclear installation’, from the Greens. The opposition has what we hope is a compromise position that might be accepted by all the parties. If it is, that could dispose of the matter. The difficulty is that we do not have Senator Margetts in the chamber at the moment.

**The TEMPORARY CHAIRMAN**—Perhaps the minister at the table can clarify it. My understanding is that we could deal with government amendments, opposition amendments and then the Greens amendments.

**Senator TAMBLING** (Northern Territory— Parliamentary Secretary to the Minister for Health and Aged Care) (12.19 p.m.)—I am prepared to withdraw government amendment No. 1 and support opposition amendment No. 1.

**Senator STOTT DESPOJA** (South Australia— Deputy Leader of the Australian Democrats) (12.19 p.m.)—I was going to ask a question of the minister, not specifically in relation to this amendment but in relation to the bill as a whole. I understand, and other people were led to believe, that originally this legislative framework was going to include uranium. Is that correct? Is there a reason for the government not including uranium in this legislation?

**Senator TAMBLING** (Northern Territory— Parliamentary Secretary to the Minister for Health and Aged Care) (12.20 p.m.)—I am advised that the bill deals only with Commonwealth activities in this area. But the area of regulation will also give scope for ARPANSA to advise on matters relating to uranium.

**Senator FORSHAW** (New South Wales) (12.21 p.m.)—I understand that we are actually dealing with various proposals to amend clause 12, which deals with the definition of ‘nuclear installation’, and that the government has withdrawn its proposed amendment No. 1. It accepts our amendment, which has been circulated on sheet 1210. We welcome that. It is really now in the hands of the other parties. I move:

Clause 12, page 8 (lines 14 to 22), omit the definition of **nuclear installation**, substitute:

*nuclear installation* means any of the following:

- (a) a nuclear reactor for research or production of nuclear materials for industrial or medical use (including critical and sub-critical assemblies);
- (b) a plant for preparing or storing fuel for use in a nuclear reactor as described in paragraph (a);
- (c) a nuclear waste storage or disposal facility with an activity that is greater than the activity level prescribed by regulations made for the purposes of this section;
- (d) a facility for production of radio-isotopes with an activity that is greater than the activity level prescribed by regulations made for the purposes of this section.

I will now wait to find out what the attitude of the other parties is.

**Senator MARGETTS** (Western Australia) (12.21 p.m.)—It is obvious that the Greens (WA) also have amendments Nos 1 and 2 in relation to the definition of nuclear installation. It is an issue that is of major concern to the groups that have been dealing with this bill. I will explain what we are trying to do with our amendment. We can then deal with the whole lot consequently.

What we would be trying to achieve is to effectively ban a whole range of nuclear installations which we do not currently have in Australia and which we do not want to have. I would like to ask each of the honourable senators in this place to consider whether they would want any one of the facilities on their list in their state or near their home town and then ask themselves why they would want to be able to go ahead under a regulated regime like this one where all the authority for licensing is in the hands of one person—that is, the CEO of ARPANSA. I suspect that if you were

totally honest with yourselves you would acknowledge that these are facilities so objectionable to the vast majority of Australians that you would have to answer 'no' to those questions.

I would like to argue that our amendment seeks to ban such facilities from definition. The opposition's amendment is to change the definitions and, whilst I will give my argument, I will ask whether or not we could change the order in which the amendments are dealt with, because ours is, I guess, the stronger approach. The opposition's proposal has also been discussed with us and is considered to be a better approach than exists in the bill. I will continue with my argument but perhaps we can think in the mean-time whether we could change the order in which the amendments are dealt with and go from the strongest approach down to the next acceptable approach from and so on.

Let us look at each of the proposals in turn, starting with a nuclear fuel fabrication plant. As if it is not bad enough that Australia has let itself be drawn into the nuclear war cycle by mining uranium, we have here a facility which would see Australia turn uranium into fuel. Clearly, with Australia's use of nuclear fuel being entirely focused on Lucas Heights, there is no need for us to produce our own. The quantity required would not justify it. Then there is the problem of what we would do to it once it was used. As long as we are getting our fuel from elsewhere, we can insist on its return. That is what the government wants us to do, and there is no need for us to have a nuclear fuel fabrication plant.

Next, let us look at a nuclear power plant. I am pleased to see the government proposes taking nuclear power plants out of the definition of nuclear installations in this bill. This amendment strengthens the position by explicitly prohibiting nuclear power stations from being licensed by ARPANSA. There is virtual unanimity in Australia in opposing nuclear power. We hear the odd politician from the right side of politics—and perhaps we also hear the other odd person—who thinks there is money to be made, but in general the amendment recognises and specifically includes any possibility of nuclear power stations being licensed.

Let us look at an enrichment plant. What is an enrichment plant? Primarily, it is used for turning radioactive materials into even more radioactive materials for use in weapons. It is an appalling concept and one which we would have no part of and should have no part of. Whilst it can have civilian uses, it is one of those dual use facilities which is the key link between civilian and military uses. To anyone who stands up and says 'No, there is not any swap between military and civilian uses'—as I guess the minister may, from time to time—you should go and speak to the substantial delegation from the former Soviet Union. There were about 12 of them, and they could give you chapter and verse of the free movement over time between civilian and military uses of nuclear material and enriched nuclear material in their country. It can be used either for the production of plutonium or for enriched uranium, both of which have potential uses in weapon development. If we are serious about nonproliferation, we should ban enrichment in Australia.

Let us look at a reprocessing facility. Reprocessing of nuclear fuel is one of the dirtiest stages of the nuclear fuel cycle, and it is the most radiologically damaging part of the cycle as far as worker health is concerned. It also has a role in separating weapons grade fuel. We should have no part in it.

Let us look at a nuclear waste storage or disposal facility. What a euphemism this word 'disposal' is. One of the things that came out clearly in the *No Time to Waste* report is that we would not be disposing of waste, we would be storing it—because there is no way of disposing of it. It is still there—it is just somewhere else, and we are hoping that when we do choose facilities for storing waste we will choose ones we can see and monitor easily and clearly for the time that we live and our children are alive.

Unfortunately, you cannot just dispose of nuclear waste and then it is gone. No safe permanent disposal of nuclear waste has been invented, and whatever attempts are made to do so will only incur intense and continuing problems for the management of that waste for thousands of years. We would hope that there are safer ways of dealing with that, but they do not exist yet. Even the synroc technology still has problems that are acknowledged.

It is a symptom of the desperation in the nuclear industry that they are floating this idea of the outback of Australia—a far-flung part of a far-flung land, the other part of the world, a desert; do not worry about it. We are all politically aware of the fact that the United States up to now has not wanted any other country to be involved with collecting, storing or reprocessing this material because of the security issues. We also know that they have got one heck of a problem convincing anybody in their community that they should take it. We have heard that in the contributions so far and in particular from Senator Allison. It is not the ideal dumping ground, as we know. We must not give the potential dumpers any comfort, and we must outlaw nuclear waste dumps. So I would like Senator Forshaw in particular, considering it is the ALP's amendment and if he would be happy to reverse the order of putting the amendments, to deal with the prohibition first and then the change of definition later.

**Senator BROWN** (Tasmania) (12.28 p.m.)—While Senator Forshaw is thinking about that, I have some specifics that I would like to put to the government, and maybe they can consider them during the lunch break coming up shortly.

**Senator Tambling**—Why didn't you come and make a second reading speech?

**Senator BROWN**—I didn't come and make a second reading speech because the government had requested this debate to be as short and as specific as possible. If the government is inviting me to be more expansive, I would be happy to do so.

**Senator Tambling**—You have had other opportunities, including the committee.

**Senator BROWN**—Senator Tambling, you are there now to give information to this committee, and I am about to seek some. How long this takes will depend on how well you are able to supply the information I seek.

The first question to be asked, of course, is why this legislation and this definition do not apply to all installations in Australia and why the Commonwealth has not used this opportunity to take on national responsibility for all installations.

At the top end of Salamanca Place in Davey Street in Hobart is the nuclear repository for waste in that state. It is in the basement of a public building. It is there because the Tasmanian authorities cannot find anywhere else to put it because, as Senator Margetts was just saying, nobody wants even low-level nuclear waste in their territory. I would have thought this would have been an opportunity for the Commonwealth to take national responsibility for coordinating the safe storage of such waste when governments like Tasmania's are blatantly incapable of finding a solution to the problem.

The second question has to do with the Silex laser enrichment research and development project currently taking place at Lucas Heights. My understanding from Micle Schneider, the French expert who was here for the International Physicians for the Prevention of Nuclear War conference in Melbourne over the weekend, is that such a project has weapons potential. It is to do with the enrichment of uranium and plutonium, and research is being done at the behest apparently of a United States company. It may well be research that is being done in Australia because it would be under difficulties in the United States where much tougher patenting and security laws are in place.

Such companies have a tendency to want to do research outside the United States because they can get away with things they could not in the United States, and Israel is one of those countries where such research is often undertaken. It appears on this occasion that it is being undertaken in Sydney at Lucas Heights with about 12 people engaged in the project. I am seeking information from the minister as to what that project is specifically about. Is the laser enrichment process that is being worked on one that could potentially be used in weapons production? Why is it being undertaken in Australia? What are the ramifications? What information can the Commonwealth give to this committee about just what is going on there?

Thirdly, we go to Kakadu. The government leader in this debate, Senator Tambling, will be familiar with this one, and I guess it will not take so much re-search. At the moment, Cyclone Thelma is off the coast of the Northern Territory, as we are all aware. But at Kakadu, more specifically in the Ranger uranium facility, it has been reported by the Office of the Supervising Scientist that there are increased uranium concentrations in the constructed wetland filter.

To put this in simple terms, according to my advice, where the usual level of soluble uranium permitted is four micrograms per litre, it has recently been measured at 6,300 micrograms per litre—a figure which is through the roof. There is provision for this wetland filter to be diverted elsewhere if there is an overflow. The concentration of the uranium and possibly daughter nucleides such as radium, chlorium and polonium is unusually high because the filter is very low and very acidic. Potentially we could see that go to an overflow and flood situation, and I ask the minister: what provision is being made to ensure that this extraordinarily high level of soluble uranium is not a threat to the ecosystem within the Ranger facility or beyond?

My next question relates to Pine Creek, and Senator Tambling will also know about this. I simply want to know whether Pine Creek is a working facility—that is, a uranium mine—at the moment. Is there extraction of any ore taking place at Pine Creek? Is any ore going to the Ranger facility? If so, under whose authority?

Finally, I would like to ask about Roxby Downs in South Australia, the Olympic Dam project. We have been told that the old pilot plant at this project is being used to clean radiation contaminated equipment before it is taken off site. I would like the government to tell us about that. The equipment apparently is being taken to the old pilot plant and sandblasted in the open air, in effect turning that region into a low-level radioactive waste dump.

Is it true that the sandblasting is taking place to clean equipment at the old pilot plant? What is the government's knowledge of this? How is it keeping tabs on it? Will the government be able to tell the committee if it does not know about what has taken place there, what clean-up procedures are necessary, whether the company is complying with its licence conditions, whether any workers are being exposed to radiation and when the last audit was taken of this operation? Does this bill cover the management of this type of radiation hazard, which I am told is occurring at Roxby Downs? If this bill does not, why does it not?

**Senator TAMBLING** (Northern Territory— Parliamentary Secretary to the Minister for Health and Aged Care) (12.36 p.m.)—I think it would have been more appropriate if a number of the issues raised by Senator Brown were raised at earlier stages in the consideration of this legislation and during the committee stage or, alternatively, raised of portfolio ministers at question time because they are not necessarily directly related to this particular legisla-tion. I do note that it is a broadcast day and, therefore, it has given Senator Brown an opportunity obviously to canvass issues which he sees as matters of concern.

I will turn, firstly, to the three specific issues that Senator Brown raised: the Ranger facility at Kakadu, the linking somehow of that to current Cyclone Thelma and then the wetlands filter. I suggest that this is very properly a matter that Senator Brown ought to be canvassing with Senator Hill, as Minister for the Environment and Heritage, and asking him to look very carefully at this legislation. It is important to note that this legislation will facilitate national codes of practice that will, in turn, assist in some of the areas of inquiry by Senator Brown.

I have not been specifically advised about the particular facilities at Pine Creek or Roxby to which Senator Brown referred. I note that they are properly mining and resources matters that I thought he would have raised in the first instance with those ministers responsible in this place or alternatively with the Northern Territory or South Australian authorities which have specific issues to address in that area. I will certainly make inquiries about that.

In relation to research and Salamanca Place, Senator Brown asked why the Commonwealth has not taken over all of the facilities. There are a number of issues that are properly still state responsibilities, so it is a matter of pursuing those appropriate responsibilities. The reference to Salamanca Place waste will be handled when the waste repository comes on stream.

**Senator STOTT DESPOJA** (South Australia— Deputy Leader of the Australian Democrats) (12.39 p.m.)—The parliamentary secretary has been a little cheeky—if that is not too unparliamentary—in his comments regarding broadcast day, because I suggest the parliamentary secretary has also used broadcast to his advantage during this debate. Quips about Democrat bedtime reading do not go unnoticed. But I do confirm your statement, Senator Tambling: Democrats and Greens bedtime reading indeed is very scary—we are reading government bills, so that probably explains it.

I have a question to both the government and the opposition about the first amendment moved by Senator Forshaw in relation to the definition of nuclear installation. I want to get from both honour-able senators their understanding of whether or not the definition can include—and I suspect it may be able to—nuclear reprocessing and power generation.

**Senator TAMBLING** (Northern Territory— Parliamentary Secretary to the Minister for Health and Aged Care) (12.40 p.m.)—I am advised that the answer is no.

**Senator BROWN** (Tasmania) (12.40 p.m.)—Spot-on, Senator Stott Despoja. We should not have to restrict what we say in here because it is broadcast day. What is this parliament about? It is about people listening in. We are here to represent people and they have a right to hear what is being debated.

I am a bit surprised by the lack of information coming from Senator Tambling for the government. It worries me that there is such little readiness of information on the very important questions I have put to the government in this debate. This is about nuclear safeguards in this country and, if the govern-ment cannot answer that sort of question, I wonder how much faith we can have in this legislation giving greater safety as far as nuclear matters are concerned.

I note in particular the question about the current situation in Jabiluka. I think that is germane to this debate. It has been raised as a matter of urgency by one of Senator Tambling's constituents in the North-ern Territory, and I would be very pleased if the senator could come back with some information about that after lunch. The possibility of a flooding of that wetland filter in the Ranger uranium site—where there are extraordinarily high levels of uranium, beyond those which are considered proper—needs to be addressed.

I turn specifically to the Lucas Heights matter. This is central to this bill and it is a Commonwealth responsibility. That is the one question that Senator Tambling did not respond to at all. This question arises out of a report to this parliament this year by the regulatory authority. That report says that, at Lucas Heights in suburban Sydney at the moment at the behest of a United States company, there is a laser enrichment research and development project afoot. I am told by a top expert in the field that the outcome of this research could be a much cheaper and more efficient way of enriching uranium and, by the way, plutonium. This has the potential to make it cheaper to run nuclear reactors.

Nuclear reactors, for those who do not know, take an extraordinary amount of energy in themselves. In fact, I am told that, in France, three or four of their suite of nuclear reactors simply provide the energy to keep the other reactors going. A laser enrichment process has the potential to lower by as much as half or more the amount of energy taken in the running of the reactors themselves. Be that as it may, the downside is that it will also make it much cheaper and much

easier to enrich uranium for the purposes of creating nuclear weapons. I would like to know from the government what is afoot with this project and what assurances they can give the committee.

**Senator TAMBLING** (Northern Territory— Parliamentary Secretary to the Minister for Health and Aged Care) (12.44 p.m.)—I am advised that, with regard to the issues raised about Lucas Heights and lasers, ANSTO has categorically denied that there is any project to do with weapons or enrichment research for weapons at Lucas Heights.

**Senator BROWN** (Tasmania) (12.44 p.m.)—What has happened here? The report says that it is going on. It is there in black and white and I will quote it after lunch. This is the government's own report. So we have an absolute contradiction here. I would ask the government to look at its Safeguard Office report for 1998—I think it is page 23; if it is not, it is section 23—which refers to the Silex laser enrichment research and development project being undertaken at Lucas Heights and explain what that report is about when we resume the debate later.

Progress reported.