

The Senate

Employment, Workplace Relations
and Education Legislation Committee

Commonwealth Radioactive Waste Management
Bill 2005

Commonwealth Radioactive Waste Management
(Related Amendments) Bill 2005

November 2005

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Government Senators' Report

Introduction

1.1 The Commonwealth Radioactive Waste Management Bill 2005 and the Commonwealth Radioactive Waste Management (Related Amendments) Bill 2005 were introduced in the House of Representatives on 13 October 2005, and passed on 2 November with 12 amendments. The bills were introduced into the Senate on 7 November 2005.

1.2 On 9 November 2005, the Senate referred the bills to the committee for inquiry and report by 28 November 2005.

Conduct of the Inquiry

1.3 Notice of the inquiry was posted on the committee's website. The committee secretariat also contacted a range of individuals and organisations nominated by committee members, in order to notify them of the inquiry and seek submissions. The committee received 233 submissions. A list of those who made submissions is at Appendix 1.

1.4 The committee conducted a public hearing in Canberra on Tuesday 22 November 2005. A list of the witnesses who gave evidence is at Appendix 2.

1.5 The committee thanks all those who contributed to the inquiry.

Overview

1.6 These bills clear the way for the Commonwealth to establish a radioactive waste management facility. This facility is required to manage the Commonwealth's radioactive waste, which is currently stored at 30 different locations around the country.

1.7 As a result of a continued and apparently irresolvable lack of co-operation from the states and territories, the Government has been forced to abandon a long-standing proposal to build a national repository for all radioactive waste in the country. This waste is currently stored at over 100 locations, including in hospital basements in major capital cities and at universities. The state and territory Governments will need to make their own arrangements to dispose of this waste.

1.8 The facility that these bills will enable to proceed will store or dispose of low and intermediate level waste resulting from the medical, industrial and research use of radioactive materials by Commonwealth agencies.¹

1 Minister for Education, Science and Training, *Media Release*, 15 July 2005.

Commonwealth Radioactive Waste Management Bill 2005

1.9 The purpose of this bill is to ensure that the Commonwealth has power to do all things necessary for the selection of a site for and the establishment of a radioactive waste management facility, and to transport radioactive material to a site.

1.10 The bill specifies three sites which are to undergo further site investigations. All sites are on Commonwealth-owned Department of Defence properties. They are:

- Fisher's Ridge, near Katherine;
- Hart's Range, which is north-east of Alice Springs; and
- Mt Everard, which is north-west of Alice Springs.

1.11 The bill also provides for a process to allow for the nomination of further sites by the Chief Minister of the Northern Territory, or an Aboriginal Land Council. If such a site is nominated, the Commonwealth Minister may approve that site to undergo site investigations.

1.12 This is a brief bill, and the clauses are well explained in the Explanatory Memorandum. The features of the clauses in the bill are as follow:

- Clause 5 excludes state and territory laws from operating where they would 'regulate, hinder or prevent' investigation of the sites;
- Clause 5(4) allows the Commonwealth to limit the application of clause 5, by regulation;
- Clause 6 prevents the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and the *Environment Protection and Biodiversity Conservation Act 1999* from having effect where they would 'regulate, hinder or prevent' investigation of the sites. The bill also includes a regulation-making power to exclude other Commonwealth laws and regulations from hindering investigations;
- The bill will give the Minister the absolute discretion to declare one of the sites or a specified part of one as the place where the waste management facility will be established and operated, and land that is required for a road to the site;
- If and when a site is declared by the Minister, clause 9 effects the acquisition or extinguishment of any rights or interests in the site not already acquired or extinguished by the Commonwealth, and provides for compensation for affected parties. A similar provision applies in relation to alternative sites, as described in paragraph 1.11, as well as any land needed to construct an access road;

-
- Clause 10 ensures that the acquisition or extinguishment powers in clause 9 have effect despite any law in the Commonwealth or Northern Territory, including the *Land Acquisition Act 1989*, and the *Native Title Act 1993*;
 - Clause 13 excludes state and territory laws from operating where they would 'regulate, hinder or prevent' activities in relation to, among other things, the preparation, construction and operation of the facility. The bill also contains provisions to allow regulations to be made that limit these exclusions;
 - After the site selection process is complete, the provisions of the *Environment Protection and Biodiversity Conservation Act 1999*, the *Australian Radiation Protection and Nuclear Safety Act 1998* and the Nuclear Non-Proliferation (Safeguards) Act must be complied with;
 - The Commonwealth must indemnify the Northern Territory against any action, claim or demand brought or made against the Northern Territory in certain circumstances in relation to the transport of controlled material to or from, or the management of controlled material at, the facility on the selected site. The amount of the indemnity is reduced to the extent to which any fault of the Northern Territory, its employees, agents or contractors contributed to the liability or damage; and
 - The bill provides that the Commonwealth must not charge the Northern Territory for management of controlled material generated by activities in the Northern Territory.²

Commonwealth Radioactive Waste Management (Related Amendment) Bill 2005

1.13 This bill provides that decisions of the Minister to approve nominated land, to declare land as a site for a facility, and to declare land to provide all-weather road access to a site, are not decisions to which the *Administrative Decisions (Judicial Review) Act 1977* applies.

Radioactive waste in Australia

1.14 Radioactive waste is produced in Australia from a variety of activities. Radiopharmaceuticals are extensively used in nuclear medicine, for example in radiotherapy cancer treatment and bone scanning applications. The committee was advised that about half a million Australians receive a radiopharmaceutical every year, and that on average, every Australian will need a radioisotope at some stage during their lifetimes for medical treatment.³ There are also many industrial and research

2 Drawn from Department of Education, Science and Training (DEST) submission.

3 Proof Committee Hansard, p. 70. (Dr Cameron)

applications such as silicon doping, bore hole logging, pollution monitoring, and quality control processes in industry.

1.15 Australia produces many of the products needed at HIFAR, Australia's nuclear research reactor at Lucas Heights, near Sydney. An inevitable product of the use of these nuclear technologies in Australia is the generation of waste. This waste ranges from the reactor components themselves, which become radioactive over time, to simple items such as gloves and clothing used by people handling radiopharmaceuticals. Over half of Australia's inventory consists of lightly contaminated soil, a result of Commonwealth Scientific and Industrial Research Organisation (CSIRO) research into processing radioactive ores during the 1950s and 1960s.⁴

1.16 The International Atomic Energy Agency (IAEA) divides nuclear waste into four categories:

- low level waste;
- intermediate level waste, short-lived;
- intermediate level waste, long-lived; and
- high level waste.

1.17 Appendix 3 reproduces a table showing how the IAEA classifies waste.

1.18 According to the Department of Education, Science and Training (DEST), most of Australia's radioactive waste consists of low level and short-lived intermediate level waste. Approximately 3,700 cubic metres of low level and short-lived intermediate level radioactive waste from over forty years of research, medical and industrial uses of radioactive materials have now accumulated.

1.19 Australia also holds approximately 500 cubic metres (equivalent to about 8 large shipping containers)⁵ of long-lived intermediate level radioactive waste. This includes waste from the production of radiopharmaceuticals, wastes from mineral sands processing, and used sources from medical, research and industrial equipment. Australia does not have and does not generate any high level waste. Appendix 4 shows Australia's current and expected future radioactive waste holdings.⁶

4 From DEST website:
http://www.radioactivewaste.gov.au/australia_and_radiation/amounts_of_radioactive_waste_in_australia.htm

5 A standard 40 foot shipping container contains 2400 cubic feet, equivalent to about 67 cubic metres.

6 From DEST website:
http://www.radioactivewaste.gov.au/australia_and_radiation/amounts_of_radioactive_waste_in_australia.htm

1.20 By international standards, Australia produces small amounts of radioactive waste. The CEO of ANSTO, Dr Cameron, advised the committee that in France, the Government has disposed of 651 000 cubic metres of waste similar to that Australia produces in its surface repositories; and the USA has transported and disposed of almost 4 million cubic metres of waste.⁷

1.21 The return of spent fuel rods from the HIFAR reactor, which are currently being reprocessed in France, will add approximately 132 cubic metres to Australia's inventory of intermediate long-lived waste. These rods have accumulated over the 40 years that HIFAR has operated. Dr Cameron noted that in comparison, France produces 930 cubic metres of intermediate level waste and 155 cubic metres of high level waste every year.⁸

1.22 The amount of low level and short-lived intermediate level waste that Australia produces every year is also low by international standards. Each year, Australia produces approximately 40 cubic metres of such radioactive waste – less than the volume of one shipping container. By comparison, Britain and France each produce around 25 000 cubic metres of low level waste annually.⁹

The search for a site

1.23 Radioactive waste is currently stored in a large number of locations around the country, including in hospital basements in large capital cities. The committee understands that there are storage facilities in all states and territories. These include low-level waste stores at Esk in Queensland, Woomera in South Australia and Mount Walton, in Western Australia.¹⁰ In the Northern Territory, waste is stored at the Royal Darwin Hospital and at a facility near Katherine.¹¹ Used fuel rods from the HIFAR reactor are stored on-site at Lucas Heights. Commonwealth nuclear waste (as distinct from state government and other waste) is stored at 30 different locations.

1.24 While this waste is currently considered to be stored safely, the storage of waste in this way has long been recognised by state and Commonwealth Governments as sub-optimal and not world's best practice.

1.25 The search for a suitable site for a waste management repository has been going on for many years. DEST representatives advised the committee that it commenced in 1979, when the states and territories approached the Commonwealth to

7 Proof Committee Hansard, p. 69.

8 Proof Committee Hansard, p. 69

9 From DEST website:
http://www.radioactivewaste.gov.au/australia_and_radiation/amounts_of_radioactive_waste_in_australia.htm

10 Proof Committee Hansard, p, 47.

11 Media Release, Australian Government Minister for Education, Science and Training, 15 July 2005.

set up a Commonwealth-State group to look at the siting and establishment of facilities. That process failed in the 1980s.¹² The process was recommenced in 1992, but even then, difficulties were apparent. As the then Minister noted in a media release:

I have sought the co-operation of the states. The response has been disappointing, and the Commonwealth will have to identify, and may need to acquire, a site if co-operation is not forthcoming.¹³

1.26 Nonetheless, the process commenced in 1992 proceeded. Criteria for selecting a site were established and listed in a discussion paper issued by the Government, *A Radioactive Waste Repository for Australia: Methods for Choosing the Right Site (1992)*. The paper noted that:

A suitable repository site must have long-term stability and attributes that will enable the wastes to be isolated so that there is no unacceptable risk to people or the environment either while it is operating or after the site has closed. Criteria for site selection include natural physical characteristics as well as socioeconomic, ecological and land-use factors.¹⁴

1.27 The primary criteria for site selection identified in the paper were as follows:

- low rainfall, free from flooding, good surface drainage, stable geomorphology;
- a generally stable hydrogeological setting and a water table at least 5 metres below the buried waste;
- geology and hydrogeology amenable to modelling groundwater and radionuclide movements;
- away from known or anticipated tectonic, seismic or volcanic activity that could destabilise disposal structures or affect the containment of the waste;
- no groundwater that is potable or suitable for agriculture can be contaminated;
- low population density with little prospect for increase or development; and
- geochemical and geotechnical properties that inhibit radionuclide migration and facilitate repository operations.¹⁵

12 Proof Committee Hansard, p, 77.

13 Minister for Primary Industries and Energy, *Media Release*, 1 June 1992.

14 *A Radioactive Waste Repository for Australia: Methods for Choosing the Right Site*, from DEST website at:
http://www.radioactivewaste.gov.au/framework/publications/repository_publications.htm

15 *A Radioactive Waste Repository for Australia: Methods for Choosing the Right Site*, p. 5.

1.28 Following an extensive and scientific selection process, eight regions were identified as being likely to contain suitable sites for a repository. On 15 November 2000, the South Australian Parliament passed a bill prohibiting the establishment of a storage facility in South Australia. On 24 January 2001, the Government announced that a site known as Evett's Field West, north-west of Woomera in South Australia, was to be the site for a repository for low-level and short-lived intermediate level radioactive waste.

1.29 The Commonwealth Government subsequently announced, on 8 February 2001, that 'given the lack of unanimity among states and territories about the desirability of a national store for all of Australia's intermediate-level radioactive waste', it would establish a storage facility on Commonwealth land for intermediate level waste produced by Commonwealth agencies.¹⁶

1.30 In May 2003, following controversy about the Evett's Field West site, the Government announced that site 40a on a pastoral property in South Australia would be the location of the repository, which was to take low-level waste only. The Minister for Science indicated that the intermediate-level waste site store would not be sited in South Australia. Both the Governments of the Northern Territory and Western Australia reacted, indicating that they would oppose any moves to site such a facility in their states.

1.31 Site 40a was South Australian Crown land, and the Commonwealth sought to acquire it. The South Australian Government sought to pre-empt this decision by declaring the site a national park. The Commonwealth was subsequently successful in acquiring the land, but action in the Federal Court followed, ultimately culminating in a ruling on 24 June 2004 setting aside the compulsory acquisition of the land.¹⁷

1.32 On 14 July 2005, the Government announced that it was abandoning the repository project and issued a media release announcing the decision to examine the three sites in the Northern Territory. In issuing this media release, the Minister for Education, Science and Training (the Hon Dr Brendan Nelson MP) noted that:

This decision followed the failure of the states and territories to cooperate with the Australian Government in finding a national solution for the safe and secure disposal of low level radioactive waste. The South Australian Government's opposition to the national repository near Woomera ended a bipartisan approach to radioactive waste management that had existed for more than a decade under both Labor and Coalition Federal Governments.¹⁸

16 Senator the Hon. Nick Minchin, *Media Release*, 8 February 2001.

17 The preceding paragraphs are derived from a Parliamentary Library publication, *Radioactive Waste and Spent Nuclear Fuel Management in Australia*, at <http://www.aph.gov.au/library/pubs/online/RadioactiveWaste.htm>

18 The Hon. Brendan Nelson MP, *Media Release*, 15 July 2005.

The requirement to over-ride Territory and other laws

1.33 The Northern Territory Government and a number of other submissions protested strongly at the Commonwealth's decision to include in the bills provisions that over-ride existing and future Territory laws. The Chief Minister, the Hon. Clare Martin MLA told the Committee that:

It deliberately rides roughshod over the concerns of Territorians and strikes down the laws made by its democratically elected representatives. Any bill which had a similar impact on the rights of state citizens or on state laws would never be contemplated.¹⁹

1.34 The Central Land Council (CLC) also expressed concern about laws being over-ridden by the Bill:

More specifically, the legislation has the effect of over-riding native title, environmental and heritage considerations, considerations that are of particular relevance given the importance of the Mt Everard and Harts Range/Alcoota sites to Aboriginal people. In addition, traditional landowners will also be unable to protect any sacred sites or culturally important places because the Northern Territory Aboriginal Sacred Sites Act will have no effect.²⁰

1.35 The Department of Education, Science and Training explained that it was necessary to include these provisions because the states and territories had made it clear that they would do everything possible to frustrate the Commonwealth's intentions:

Specific legislation to enable the Commonwealth to responsibly and effectively manage the waste is needed because State and Territory jurisdictions, including the Northern Territory, have introduced specific laws purporting to prohibit the establishment of a radioactive waste management facility and the transportation of radioactive material to such a facility. Further, the Northern Territory Government has made it clear it will do everything possible to halt or frustrate the Commonwealth's actions.²¹

1.36 The Committee notes that the Northern Territory's *Nuclear Waste Transport, Storage and Disposal (Prohibition) Act 2004* (NT Act) was enacted with the specific intention of preventing the Commonwealth from establishing a radioactive waste management facility in the Northern Territory (NT).

19 Proof Committee Hansard, p, 47.

20 *Submission 144.*

21 DEST, *Submission 126*, p. 3.

Views of Land Councils

1.37 The Central Land Council (CLC) submitted that traditional landowners of both the Alcoota/Harts Range and Mt Everard sites are strongly opposed to the Commonwealth radioactive waste management facility being located at either site or on any part of their country, and had instructed the CLC to assist them to oppose such a facility from proceeding.

1.38 The Northern Land Council (NLC) was more conciliatory. NLC representatives acknowledged that there is a need for the Commonwealth to acquire land for long-term, safe and secure waste storage. The NLC expressed opposition to the NT Act, stating that it had been enacted without consultation or their consent:

This was the case notwithstanding that the Act prevents traditional owners from developing their country for a waste facility should they wish.²²

1.39 The NLC appears to accept that a facility can be built and operated safely. Representatives advised the committee that they had sought an amendment to the bill allowing a Land Council to volunteer a site, if traditional owners consent and provided that sacred site and environmental issues are resolved, and native title is not extinguished unless by consent.²³

1.40 The NLC noted that an amendment had been introduced implementing most of the changes sought, although representatives considered that further changes were required so that the Chief Minister, by nominating a site, could not over-ride various rights of veto and to rights to negotiate, or over-ride procedural protection provisions.²⁴

1.41 It is clear that the NLC's support for the legislation is conditional on traditional owners retaining a final veto right concerning the location of a waste facility on the basis of sacred site and environmental considerations. The bill in its current form does not appear to meet this requirement.

1.42 In its submission, DEST notes that there have been a number of publicly threatened actions by the Northern Territory Government and others to delay, prevent or obstruct the Commonwealth's activities.

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and the *Environment Protection and Biodiversity Conservation Act 1999* will not apply to the site investigation phase of the project. The Government considers that these Acts, were they not disappplied, would

22 NLC, *Submission 124*, p. 3.

23 NLC, *Submission 124*, p. 4.

24 See p. 4 of the NLC submission.

offer an opportunity for persons to unreasonably interfere with the site selection process.²⁵

Suitability of the sites selected

1.43 A number of submissions and several of those who gave evidence questioned the suitability of the three sites selected. Submissions from Katherine community groups particularly questioned the suitability of the Fisher's Ridge site, pointing out the area receives some of the highest rainfall in the country, is composed of unstable limestone country with numerous sinkholes which can open up unexpectedly, and overlies a major aquifer, the Tindal Aquifer.²⁶

1.44 Katherine community groups also pointed to extensive horticultural developments not far from the proposed site, and expressed concern about the possible effects of the facility on the developing tourism industry.

1.45 Several submissions argued that the site selection criteria appeared to have been set aside, and that there was no scientific basis to the selections made.

1.46 It was suggested to the committee that Lucas Heights should continue to be the site for storing the waste, and that the repository should be located there. This would require an amendment to the ANSTO Act. The CEO of ANSTO, Dr Cameron, acknowledged that ANSTO had safely stored the wastes generated by HIFAR for many years, and has the capacity to continue to do so. However, he said that on siting criteria for a repository, 'Lucas Heights would not score highly on those'.²⁷

1.47 The committee sought information from DEST representatives about the way the three sites were selected. Representatives advised that the selection process was carried out by officials, predominantly from the Department of Defence:

The department looked at the sites for their suitability according to these criteria in a general sense, but we were also provided with information on sites by the Department of Defence. We had very broad criteria that did not require a high-level technical committee. Criteria were applied such as proximity to infrastructure, proximity to population centres where you might get some infrastructure support for the facilities, Defence's plans for the future use of the site, and likely growth constraints on sites. Defence's operating requirements were also important.²⁸

25 DEST, *Submission 126*, p. 4.

26 See for example Katherine Landcare Group, *Submission 12*; Katherine Nuclear Dump Action Group, *Submission 145*.

27 Proof Committee Hansard, p. 71.

28 Proof Committee Hansard, p. 72.

1.48 The committee notes that the nomination of the three sites in the bill will not preclude a closer examination of the suitability of the sites against the previous selection criteria, and after site selection, a long regulatory process will commence, starting with the assessment of the site under the Environment Protection and Biodiversity Conservation Act.

1.49 Further, the licensing processes under the Australian Radiation Protection and nuclear Safety (ARPANS) Act are rigorous, and the committee is confident that the several stages of scrutiny by ARPANSA that the selected site will be required to pass will ensure that high standards for the longer-term safety of the site are maintained.

Safeguards

1.50 From the many submissions sent to the committee, it is clear that there is considerable concern, at least in parts of the community, about whether radioactive material can be safely stored in the longer term. For many people, this is a highly emotive issue. Some submissions showed a deep seated suspicion of all things nuclear, and appeared to be assuming that the materials concerned could not or would not be handled safely, or stored without any ongoing risk to human health or environmental contamination. For example, the ACF submitted that:

There is a significant and unnecessary risk to the health, safety and rights of communities across Australia from ANSTO's current and proposed reactor operations and waste production at Lucas Heights and the proposed nuclear waste transport to, and imposition of, a nuclear dump in the NT.²⁹

1.51 It is indisputable that if handled incorrectly, radioactive materials can pose a risk to human health. This risk rises in proportion to the level of radioactivity of the material and the dose received. The committee therefore sought information from the organisation responsible for the monitoring of the safe handling of nuclear materials in Australia, the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), about the safety of the proposal and safeguards that will be put in place to ensure the safety of any persons living in the vicinity of the proposed facility, or along transport routes that will be used to transport the waste to the facility.

1.52 The committee asked the CEO of ARPANSA, Dr Loy, about whether he was confident that it is possible to build and engineer a facility to the level of safety that is required under modern best practice safety standards. Dr Loy responded that he considered that this was the case.³⁰

1.53 Dr Loy explained that ARPANSA's role commenced after the site had been selected. As a radioactive waste repository is a 'controlled facility' under the ARPANS Act, all stages of the design, construction and operation of the site would come under

29 ACF, *Submission 124*, p. 1.

30 Proof Committee Hansard, p. 34.

ARPANSA's licencing requirements, and cannot proceed unless stringent safety requirements are met. Dr Loy explained:

In making a decision as to whether to issue any such facility licence, the CEO of ARPANSA is required to take into account, amongst other things: international best practice in relation to radiation protection and nuclear safety; whether the proposed conduct can be carried out without undue risk to the health and safety of people and to the environment; whether the applicant has shown that there is a net benefit from the conduct; whether the applicant has shown that the radiation doses arising are as low as is reasonably achievable, having regard to economic and social factors; whether the applicant has shown a capacity to comply with the licence; and, if the application is for a nuclear installation, the content of any submissions made by members of the public. The application or applications would thus be subject to close scrutiny and would need to demonstrate the safety of the facility...

...This guidance will draw upon high-level, current international guidance that represents international best practice in radiation protection and nuclear safety for such facilities.³¹

1.54 Dr Loy explained that the acceptable doses that would be allowed for members of the public or workers at the facility would be very low:

...you are looking to see that, during the operation of the repository, the public and the workers receive no more radiation dose from the operations of the repository than they would from any other facility that uses radioactive material. There are well-known dose limits and dose constraints, as they are called in the trade, set down in the international literature to ensure that only very small doses can be received by the public and the workers in the operation of a repository.

...the applicant needs to demonstrate that the arrangements it has in a repository are sufficient to limit the doses to operators and the public during the operation of the repository and that, when it is closed and in the long term, the risks arising from accidental exposure are very small.³²

1.55 ARPANSA's licencing procedures are also subject to both public comment and international peer review. Dr Loy explained that once an application for a licence is received (to build or operate), ARPANSA calls for public submissions. He explained the process:

Once the application is received, I publish it...and I call for public submissions. In the meantime, I usually arrange for an international peer review of the application...that is, I get people of expertise from around the world to come and review the application and provide a report, which I

31 Proof Committee Hansard, p. 32.

32 Proof Committee Hansard, p. 33.

publish so that it is available to people. I have my advisory committees. I mentioned the council, but also there is the Nuclear Safety Committee and the Radiation Health Committee, whom I will ask to look at various aspects of the proposal, and I publish their reports. So a lot of information is available to people. The public applications are received and published, and then we would move to a public forum, at which, as I said, the public submitters would state their case, as would the proponent, and be questioned by a panel that I usually make up of me, an international expert and a person who comes from a background that is perhaps more inherently sceptical of the proposal than they might otherwise be. So there is a testing. The reports of the panellists are published and the transcript is published. A lot of information is put out there and there is plenty of opportunity for people to put forward their views. As I said, I must take them into account. In making my decision, I have to explain how I took them into account.³³

1.56 The committee also sought Dr Loy's views about whether the materials could be transported safely to the site. He advised that the safe transport of materials was an issue that the radiation protection community regarded as 'pretty much solved', and that the transportation of these materials had a good safety record:

Again, a lot of work over the years has gone into looking at the containers that you use for the transport of different forms of radioactive material. A lot of transport goes on of different kinds of material and it is generally regarded as meeting good safety requirements with a good safety record.³⁴

Urgency of identifying a site

1.57 A number of submissions criticised the apparent haste with which the Government was proceeding with this proposal. It was suggested that there were several years available yet before a site had to be chosen, which would allow for more extensive community consultation and a more rigorous process of site selection.

1.58 DEST representatives responded that the establishment of the facility was now considered urgent:

I think the government probably considered that it had a deadline with fuel arriving in 2011. As I have shown, we have an extensive regulatory process to get through before then and we have less than six years to do it. That may have determined the government's course of action.

...

There are two considerations. The one we are most concerned with, as the provider of the facility, is that that facility is available when that reprocessed spent fuel will return to Australia in 2011. As I have indicated,

33 Proof Committee Hansard, p. 35.

34 Proof Committee Hansard, p. 34.

we have six regulatory stages to go through. One of them alone can take up to two years, so we do not have too much time.³⁵

Public Consultation

1.59 A number of submissions and witnesses were also critical of an apparent lack of consultation in relation to the decision to select three sites in the NT.

1.60 The Chief Minister, for example, told the committee that the first she had heard of the current proposal was the media release from the Minister, Dr Nelson, on 15 July 2005.

1.61 Similarly, the Alice Springs Town Council had little information about the proposal. Alderman van Haaren told the Committee:

Alice Springs Town Council have really been catapulted into providing responses in the community very much still on innuendo and rumour. We do not have any facts and we have not been briefed...³⁶

1.62 Others disagreed. The representative of the Minerals Council, for example, told the committee that the Council was happy with the advice received so far, but like most Territorians, was seeking further information. The representative told the committee that 'there has been a lot of misinformation circulating in the community'.³⁷ Similarly, the representatives of the NLC appeared to be not only reasonably well informed about the nature of the proposal, but were taking active steps to add to this information.

Conclusions and recommendation

1.63 The committee recognises that the process of selecting a site for the establishment of a nuclear waste disposal and storage facility which is enabled by these bills is not the usual way of proceeding.

1.64 However, in the face of continued refusal on the part of the states and territories to host such a facility, and despite widespread acknowledgement that such a facility is needed, no other course of action appears to be now open to the Government. The regulatory processes associated with commissioning a disposal facility will be inevitably time consuming and must be completed before reprocessed HIFAR fuel rods are returned from France in 2011.

1.65 Australia needs a radioactive waste repository. Even the Chief Minister of the Northern Territory acknowledged this requirement:

35 Proof Committee Hansard, p. 77.

36 Proof Committee Hansard, p. 41.

37 Proof Committee Hansard, p. 27.

The Northern Territory government recognises and acknowledges the benefits that follow to the Australian community by what is produced by that organisation [ANSTO] and the research they do. The Territory government recognises the benefits that flow from radiopharmaceutical medical procedures and the variety of industrial, scientific and domestic applications that use radioactive materials. We are on the public record as acknowledging the need for safe and secure disposal of residual waste material.³⁸

1.66 The committee calls on the States to urgently reconsider their positions in relation to the establishment of a single, purpose-built and secure repository. It is long past time to set aside the not-in-my-backyard syndrome which has characterised this debate. At the same time, the committee calls on DEST to be more pro-active in adequately informing community groups about the proposal. A considerable proportion of the opposition to this project appears to be based on misconceptions and ignorance. These must be dispelled if the project is to gain widespread community acceptance.

Recommendation

The committee recommends that the bills be passed.

Senator Judith Troeth
Chair

Opposition Senators' Report

2.1 Opposition senators begin this dissenting report into the *Commonwealth Radioactive Waste Management Bill 2005 and Commonwealth Radioactive Waste Management (Related Amendments) Bill 2005* by objecting to the Government's mishandling of this inquiry. A one-day inquiry held in Canberra did not allow the committee to visit the Northern Territory and the people most affected by this bill. Hearings in Katherine, Alice Springs and Darwin would have been appropriate. Less than a week was allowed for lodging submissions. The hearing was held three days later allowing little time to scrutinise the 231 submissions. This report was scheduled for a week after the hearings, leaving manifestly inadequate time to prepare considered reports by either Government or Opposition Senators. This subversion of the Senate's democratic processes and effective law making reflects the Commonwealth's intentions in this bill.

2.2 As the Chief Minister of the Northern Territory, the Hon. Clare Martin MLA noted:

Had the hearing been conducted in the Territory, either in Darwin or in the regional centres closest to the proposed sites of Katherine and Alice Springs, I can assure the committee there would be significantly more Territorians in the room today.¹

2.3 Opposition Senators thank those who contributed to the inquiry, despite the obstacles placed in their way by the Commonwealth Government.

2.4 In introducing this bill, the Commonwealth Government has unilaterally abandoned the previously bipartisan approach to selecting a site for a national nuclear waste dump. That approach was based on the careful selection of a site on the basis of sound scientific principles and other carefully developed criteria. The approach announced by the Minister for Education, Science and Training, Dr Brendan Nelson on 15 July 2005, lacks any scientific rigour, and is based on political expediency.

2.5 Dr Nelson's decision was in direct contravention of promises given to Northern Territorians prior to the 2004 federal election by the Federal Environment Minister Senator Ian Campbell on 30 September 2004 that the Commonwealth was not pursuing any options for the radioactive waste dump anywhere on the mainland or in the Northern Territory.

The Commonwealth is not pursuing any options anywhere on the mainland, so we can be quite categorical about that, because the Northern Territory is on the mainland.²

1 Proof Committee Hansard, p. 1.

2 ABC radio, Northern Territory, 30 September 2004.

2.6 This bill is a heavy handed and undemocratic imposition of Commonwealth power over its citizens and democratically elected State and Territory governments, particularly in the Northern Territory. As the Chief Minister of the Northern Territory pointed out during the public hearing:

It is the adoption of a process that has been described as ‘decide, announce, defend’. It is about backroom decisions being made without consultation and without discussion. It is about the imposition of the nation’s radioactive waste on Territorians without their or their representatives’ involvement in any shape or form.³

2.7 The Government's sudden decision to impose a nuclear waste dump on the Northern Territory follows a long and ultimately unsuccessful series of attempts to force South Australia to host this facility. As the Australian Conservation Foundation observed in its submission:

Despite having targeted SA since late 1997 the federal government ultimately had to recognise the electoral and political difficulty in imposing the dump facility against strong community will. This lesson has not been lost for Territorians facing nuclear dumping or on those communities across Australia concerned over the proposed transport of reactor waste through their region.⁴

2.8 Opposition Senators find themselves in agreement with the Australian Conservation Foundation's assessment that the decision to site the waste dump in the Northern Territory increases risk to the health, safety and rights of communities across Australia. As such, it is critical that community consultation and careful scientific consideration underpin site selection and nuclear waste transportation.

2.9 The process that led to the three Northern Territory sites being identified lacked any rigour. It was carried out by officials from the Department of Defence using what appear to have been the broadest of criteria, as acknowledged by officers from the Department of Education, Science and Training (DEST):

The department looked at the sites for their suitability according to these criteria in a general sense, but we were also provided with information on sites by the Department of Defence. We had very broad criteria that did not require a high-level technical committee. Criteria were applied such as proximity to infrastructure, proximity to population centres where you might get some infrastructure support for the facilities, Defence’s plans for the future use of the site, and likely growth constraints on sites. Defence’s operating requirements were also important.⁵

3 Proof Committee Hansard, p. 1.

4 Australian Conservation Foundation, *submission 125*, p. 1.

5 Proof Committee Hansard, p. 72.

2.10 In an extraordinary admission, DEST officers explained that they had sought no independent expert advice whatsoever to aid site selection.

Senator CROSSIN—In the *Hansard* for the estimates I read that the selection of sites was done with advisers. Are you saying that that is predominantly Department of Defence officials?

Mr Davoren—It is mainly officials, yes.

Senator CROSSIN—Mainly officials from the Department of Defence?

Mr Davoren—Yes.

Senator CROSSIN—So there was no-one else with a nuclear science or an environmental science background?

Mr Davoren—My section have credentials in those areas.

Senator CROSSIN—I take it from that that it might have been external advice from outside your department.

Mr Davoren—No, we did not have a panel of external advisers. There was nothing like the store committee, for instance.⁶

2.11 DEST officials attempted to justify this rushed process as being driven by the return of reprocessed fuel rods from France in 2011, and the time it would take to work through the Australian Radiation Protection and Nuclear Safety Agency's (ARPANSA) regulatory processes. This argument is weak and assumes that independent expert advice or community consultation would have hindered the site selection process.

2.12 The site announcement was also made before ARPANSA had completed finalising what will undoubtedly be relevant and useful guidelines that should have informed the site selection process:

ARPANSA is currently preparing regulatory guidance to assist applicants in preparing the information that should be provided in any application to prepare a site for, construct and operate radioactive waste management facilities - that is, a radioactive waste disposal facility, near surface, and a radioactive waste store. This guidance will draw upon high-level, current international guidance that represents international best practice in radiation protection and nuclear safety for such facilities. The draft guidance will be published shortly for a period of public comment prior to its finalisation in the new year.⁷

2.13 The low level waste repository is a permanent facility likely to likely to house waste needing protection for between 100 to 300 years. The intermediate waste stored at the site will need management for thousands of years. Given these timelines, the haste in arbitrarily imposing a site in the Northern Territory for this facility is

6 Proof Committee Hansard, p. 72.

7 Proof Committee Hansard, p. 32.

unacceptable. A proper scientific process should be followed in conjunction with the States and Territories.

2.14 These bills are designed to quash all opposition to the Government's plans to impose a nuclear waste dump on Northern Territorians and transport nuclear waste across Australia. In order to do this, the bills exclude State and Territory laws where they would 'regulate, hinder or prevent' investigation of the sites, construction of the nuclear waste dump and transportation of nuclear waste. They similarly prevent the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and the *Environment Protection and Biodiversity Conservation Act 1999* from having effect during investigation of the sites. These bills exclude the *Native Title Act 1993* and the *Lands Acquisition Act 1989* from operating at all.

2.15 The Senate Scrutiny of Bills Committee has expressed serious concern that the *Commonwealth Radioactive Waste Management Bill 2005* overrides all State and Territory legislation that gets in the way of the nuclear waste dump. The committee said:

The Committee draws Senators' attention to the provisions, as they may be considered to trespass unduly on personal rights and liberties, in breach of the principle 1(a)(i) of the Committee's terms of reference.⁸

1(a)(i) asks the Committee to examine all bills before the Parliament and report to the Senate whether such bills '*trespass unduly on personal rights and liberties.*'

2.16 The Scrutiny of Bills Committee is also concerned that the bill removes people's rights because it gives the Minister total power over selecting a site for the waste dump. The Committee has demanded that the Science Minister justify '*the inclusion of this absolute ministerial discretion and for the abrogation of procedural fairness.*'⁹

2.17 This is extreme and excessive legislation and cannot be justified by a democratic Government. This Scrutiny of Bills Committee report is a further blow to the legitimacy of the waste dump legislation.

2.18 Similarly, the Arid Lands Environment Centre was concerned that these bills set a dangerous precedent by over-riding well-tested legislative protections:

The proposed legislation removed critical protections offered to the public by existing legislation... These well-tested and well-understood instruments are the result of years of debate and consideration by the public and their representatives. The whole point of these protections is to protect and

8 Senate Scrutiny of Bills Committee report, Alert Digest Number 13, 9 November 2005, p. 19.

9 Senate Scrutiny of Bills Committee report, Alert Digest Number 13, 9 November 2005, p. 20.

defend against activities that threaten the values we cherish in our society, as expressed in a clear mandate from our society.¹⁰

2.19 The bills, if passed, will over-ride Territory legislation in a way not seen before. As the Chief Minister explained:

This bill that we are discussing today totally overrides any aspect of the Territory's laws that it chooses, particularly in relation to the siting of a nuclear waste facility and the transportation of anything to that nuclear waste facility. It overrides Territory laws that were put in place to prevent this from happening and takes away any aspect of review that we could do or any challenge that we could make to those laws. It really reinforces, from a Territory point of view, our total impotence about this. We have had a serious look at it legally and there is no capacity for us to challenge this at all.¹¹

2.20 The second bill in the package, the Commonwealth Radioactive Waste Management (Related Amendments) Bill 2005, also adds the Commonwealth Radioactive Waste Management Act 2005 to the classes of decisions that are not decisions to which the *Administrative Decisions (Judicial Review) Act 1977* applies.

2.21 This means that once the Minister has exercised absolute discretion to declare one of the sites nominated as the future site for the nuclear dump, and extinguished all non-commonwealth rights and interests in the relevant land, the decision is not subject to any form of judicial review. It would not be possible for example to launch a challenge along the lines of that successfully pursued against the compulsory acquisition of land in South Australia. It is noteworthy that the decision in that case was based, at least in part, on the lack of procedural fairness. Effectively, this means that no persons affected by the Commonwealth's decision have any redress if they believe the decision to be unfair.

2.22 The second bill, along with the proposed removal of procedural fairness provisions in the site selection process, mean that the Commonwealth Government is removing transparency and accountability from the site selection process altogether. This unprecedented exercise of power coupled with the arrogance of the Commonwealth Government in overriding community concerns is unacceptable behaviour for a democratically-elected government.

2.23 Not only do the bills specifically prevent the application of these important Acts, they also allow the Commonwealth, by regulation, to exclude other as-yet unspecified Commonwealth laws and regulations from hindering investigations. In short, in seeking passage of these bills, the Commonwealth is seeking virtually unfettered power to do as it wishes during the process of site assessment and waste

10 *Submission 69.*

11 Proof Committee Hansard, p. 5.

transportation, with no recourse to legal action possible by any affected parties. As noted by the Environment Centre NT Inc:

Under the legislation the Minister would have the power to unilaterally add further pieces of State or territory legislation to the list of laws to be overridden in pursuit of the waste dump.¹²

Lack of consultation

2.24 From the evidence received by the Committee, there was no prior notice given to the Government of the Northern Territory, Land Councils or residents that the Government had selected the three sites in the Territory as possible dump sites. As the Chief Minister told the Committee, the first she heard of it was the press release from the Minister:

The next we heard was in a press release from Brendan Nelson, as the responsible minister, saying that three sites had been selected in the Northern Territory. They were three sites simply that were Defence land. There was no science; there was no consultation with Territorians. It was just a kind of pre-emptive strike from Canberra saying to the Territory, 'There's not actually been much truth in what we've said to you so far, because we've changed our minds radically and now we're choosing the Northern Territory.' Territorians quite reasonably were very angry about it.¹³

2.25 Similarly, the Alice Springs Council told the Committee that the first the Mayor heard of the proposal was on a local radio broadcast.¹⁴ Alderman van Haaren told the Committee that this lack of consultation had not been rectified:

The lack of consultation with local government has continued. At this point in time we still have not been briefed in particular about the consequences of siting such a facility within close proximity of Alice Springs or local government. We anticipate that there may be some implications and some planning that we need to take into account, or even to a degree there may be a burden on local government that we are not aware of. We have not had any particular briefing on those issues at all.¹⁵

2.26 Mr Barry and Mrs Val Utley, owners of the property adjacent to one of the sites identified in the bill, Fishers Ridge near Katherine, were also not given any advance notice, and found out about the proposal virtually by accident:

...a friend rang us that night and said, 'Did you happen to get the newspaper?' We do not often get the newspaper. 'It mentions that Fishers

12 *Submission 127*, p.3

13 Proof Committee Hansard, p. 4.

14 *Submission 123*.

15 Proof Committee Hansard, p. 40.

Ridge is to be one out of three sites chosen for a nuclear waste dump.’ The news turned our world upside down.¹⁶

2.27 Mr Bill Daw, Alderman of Katherine Town Council, highlighted the Commonwealth Government’s real intentions in his submission:

There is a fine line between strong leadership and arrogance, and it would seem that this line is about to be crossed on this issue by a mile.¹⁷

2.28 The failure to consult with, or even give advance notice to those who were likely to be affected, including individuals, traditional owners and the Northern Territory Government, demonstrates at best a lack of simple courtesy, and at worst a blatant pre-emption and deception of the communities most affected by this Commonwealth Government decision.

Disregard for the views of Traditional Owners

2.29 The views of traditional owners, who control much of the Northern Territory, have been disregarded in this process. The Central Land Council (CLC) was particularly strong in its rejection of the proposal:

Traditional landowners for both the Alcoota/Harts Range and Mt Everard sites are strongly opposed to the Commonwealth radioactive waste management facility being located at either site or on any part of their country, and instructed the CLC to assist them to oppose such a facility from proceeding.¹⁸

2.30 It is clear from the submissions of both the Central and Northern Land Councils that the traditional owners they represent wish to retain a right to veto specific sites on environmental or sacred site grounds. This is not provided for in the bill.

2.31 It is noteworthy that the CLC regards the amended provisions of the bill allowing for a land council to propose a site as unworkable. The Land Council must show that traditional owners of a proposed site understand the nature and effect of the nomination and the things that might be done on or in relation to the land. However the CLC submission notes:

Until an area is nominated not even the Commonwealth will know what needs to be done for the purpose of selecting a site, in relation to that specific area. It may not even know what needs to be done until some time after it accepts a nomination. Yet the traditional landowners are required to know all of that before they make a nomination. The ultimate consequence of a successful nomination could be the loss of all their interests in the land

16 Proof Committee Hansard, p. 12.

17 *Submission 39.*

18 *Submission 144*, p. 3.

and in any all weather access required, upon a declaration pursuant to clause 7. Thus it follows that it is virtually impossible for a land council to meet the requirement for nomination of an area of Aboriginal land, both as to the sacred sites requirement and the informed consent requirement.¹⁹

2.32 It appears that traditional owners in North Eastern Arnhem land also oppose the proposal to site the nuclear dump on their land, despite the statements of the NLC. Mr Wirilma Mununggur, who identified himself as the senior traditional owner of the Djapu clan, submitted that:

Mr Yunupingu and the NLC have no right or authority, traditional or otherwise, to call for a nuclear waste facility in our region, unless they have consulted with, and have the consent of all the other traditional owners whose land estates would also be affected by such a facility.

...

As the senior traditional owner of the Djapu clan, I say I do not want such a facility anywhere that might affect our land, rivers or sea country. We are very concerned about the safety and environmental impacts of such a facility and the transport of wastes. We are also concerned how the security and surveillance that must accompany such a facility may impact on our lives and region.²⁰

Environmental impacts

2.33 The original site selection criteria established after the search for a site recommenced in 1992 included the following:

- low rainfall, free from flooding, good surface drainage, stable geomorphology;
- a generally stable hydrogeological setting and a water table at least 5 metres below the buried waste;
- geology and hydrogeology amenable to modelling groundwater and radionuclide movements;
- away from known or anticipated tectonic, seismic or volcanic activity that could destabilise disposal structures or affect the containment of the waste;
- no groundwater that is potable or suitable for agriculture can be contaminated;
- low population density with little prospect for increase or development; and

19 *Submission 144*, p. 6.

20 *Submission 231*.

- geochemical and geotechnical properties that inhibit radionuclide migration and facilitate repository operations.²¹

2.34 From these criteria, it is clear that environmental considerations were crucial to selecting a site. These considerations have been ignored in the selection of the three sites. The selection of the Katherine site is particularly worrying, as it is in the highest rainfall zone in the Northern Territory, and is over a major aquifer, the Tindal aquifer. This aquifer is important in providing water for several local horticultural developments. Groundwater and flooding are also significant issues in relation to the Harts Ridge site. As the Chief Minister noted:

Publicly available information shows that the underground water beneath the Fishers Ridge site is directly connected to the deeper Tindal Limestone aquifer. Katherine's water supply and many commercial horticulturalists depend on bores in this aquifer. The aquifer drains into the Katherine-Daly river system all year round. The location of a radioactive waste facility at Fishers Ridge raises concerns for the town's water supply, the environment and tourism. These issues should immediately have removed Fishers Ridge from contemplation on even the most cursory scientific analysis.²²

2.35 In relation to the Katherine site, Ms Sharon Hillen of the Katherine Nuclear Dump Action Group told the Committee that the site is also prone to both wildfire and flooding:

Flooding and fire is a phenomenon in this country, particularly in Fishers Ridge. I will start with fire. We live in a country that has a very large fuel load of long grass, or spear grass, and fires happen every year...

Flooding is something of a problem as well. Every year we have a flood. ...As Mrs Utley said, the country here acts as a sponge and it retains a lot of water. When you get a big fall of rain, you can expect a large amount of ponding and run-off of water, simply because the water table and the soil above it are saturated. This has been particularly so in the last 10 years, when we have had major rainfall events.²³

2.36 In relation to the Harts Range site, the Chief Minister suggested that the underground water beneath this area has sediments that are likely to be highly permeable.

Looking at the second site, Harts Range, the underground water beneath this area has sediments that are likely to be highly permeable. There is significant ground water in the area which feeds into surrounding creeks. The site is between two very active waterways, the Ongeva and the Anamarra creeks, and a rare megaflood has the potential to damage any

21 *A Radioactive Waste Repository for Australia: Methods for Choosing the Right Site*, p. 5.

22 Proof Committee Hansard, p. 3.

23 *ibid.*, p. 13.

radioactive storage facility. Again, a scientific analysis would probably have removed Harts Range from consideration at a very early stage.²⁴

2.37 Without engaging in the scientific basis of these arguments, Opposition Senators regard it as unacceptable that the Government did not seek any independent scientific expertise before identifying these three sites.

2.38 The Australian Conservation Foundation also drew the Committee's attention to previous serious shortcomings in the Commonwealth's proposals for the disposal of nuclear waste in South Australia, and to concerns raised by the South Australian Government which were still not addressed at the post Environmental Impact Statement stage in the Licensing Application to ARPANSA:

The Committee should be aware of serious shortcomings in previous federal government proposed siting, design and studies for the burial of radioactive waste. The concerns expressed earlier by the SA government have an importance resonance in relation to the federal proposal for an NT dump and the current draft legislation.

"I reiterate this Government's strong opposition to the establishment of this facility in South Australia and reaffirm that we can not, and will not, provide support to the establishment or operation of the facility, particularly when the Commonwealth has failed to adequately prescribe the design of a facility which could result in detrimental environmental outcomes."

(Letter from John Hill, SA Environment Minister to Dr David Kemp, then federal Environment and Heritage Minister, October 2002.)²⁵

Medical Necessity

2.39 Members of the Commonwealth Government have attempted to justify the urgency of this bill by inferring medical need. In a 13 October 2005 press release, the Member for Solomon and Senator Nigel Scullion suggested that Australia would not have access to radio-pharmaceuticals after April 2006 if the siting decision about nuclear dump were to be delayed:

A decision on the final site for the waste management facility must be made by April and a Territory Government legal challenge would take us well beyond that time.

If a decision is not made within a matter of months Australia will no longer be allowed to produce radioactive isotopes used in hospitals throughout the country.

24 Proof Committee Hansard, p. 3.

25 From Australian Conservation Foundation, submission 125, p. 6.

Australians must be guaranteed continued access to lifesaving radiopharmaceuticals. The Government has acted to ensure those in need do not lose that access. At some stage in their life, every Australian is likely to benefit from the use of radiopharmaceuticals.²⁶

2.40 The Medical Association for the Prevention of War (MAPW) disputes the argument that medical isotopes would not be available thus endangering lives, if the waste dump were delayed. The Lucas Heights reactor already shuts down for 4-6 weeks for maintenance purposes on a regular basis. During scheduled shutdowns, the key isotopes are imported from overseas. MAPW suggests that it is emotionally manipulative to draw a direct link between the waste dump and isotope production.

The “medical necessity” is worse than fallacious: it is deliberately misleading. It is a particularly contemptible manipulation of the emotions of the sick and dying.²⁷

2.41 Further Dr Nelson conceded that there is no specific end date by which the existing reactor at Lucas Heights must cease production in favour of the new construction currently under construction.

Ms Macklin – That is not to do with my question. I am asking about the date for the current reactor.

Dr NELSON – Yes. The chief executive of ARPANSA is not constrained as to when he makes his decision on the ARPANSA operating licence. ANSTO is working with ARPANSA on the expectation that a decision will be reached around April 2006, and the HIFAR—

...

Ms Macklin – There is not an actual end date?

Dr NELSON – There is no specific end date. There is no doubt, from the government’s point of view, that the chief executive of ARPANSA would be seriously stretching his own credibility, and that of ARPANSA, if he were to allow HIFAR to continue much beyond the end of 2006. As I emphasised earlier in the debate, in 2011 the first shipments of reprocessed fuel will arrive back from the UK and France.²⁸

2.42 It is irresponsible and unacceptable for the Commonwealth Government to resort to emotional blackmail.

26 Nigel Scullion/David Tollner media release, 13 October 2005.

27 *Submission 210*, p. 11.

28 *House of Representatives Hansard*, 2 November 2005, p. 34.

Developing Community Confidence

2.43 Opposition Senators note that the International Atomic Energy Association (IAEA) itself has emphasised the importance of a transparent and inclusive community consultation process in gaining community acceptance of controversial decisions such as the siting of waste disposal facilities:

Recent experience suggests that broad public acceptance will enhance the likelihood of project approval. An important element in creating public acceptance is the perceived trust and credibility of the responsible organisation and the reviewing agency or agencies.

Establishing trust can be enhanced when an inclusive approach to public involvement is adopted from the beginning of the planning process to help ensure that all those who wish to take part in the process have an opportunity to express their views, and have access to information on how public comments have been considered and addressed.

Experience further suggests that trust is promoted by providing open access to accurate and understandable information about the development programme, conceptual design and the siting process at different levels of detail suitable for a broad range of interested parties.

In addition to the perceived credibility of the responsible organisation, other aspects of public acceptability can be location-specific, based on local requirements and cultural context.²⁹

2.44 It is clear that the process proposed by the Government in these bills does not in any way try to implement IAEA guidelines. This failure to properly consult with the affected community is evidence of the Commonwealth Government's failure to take into account, or to comply with, international best practice as set out by the international regulatory and advisory body responsible for policy in this area.

Conclusions

2.45 Opposition Senators consider that the bills are deeply flawed, and a heavy handed and unwarranted exercise of Commonwealth power. The best interests of the Northern Territory and the Australian community would be better served if the Government commenced a rigorous site selection process that is inclusive of affected communities.

2.46 Opposition Senators accept the need for a nuclear waste dump to manage the radioactive waste produced by the Lucas heights reactor and from other sources. However Opposition Senators do not accept the Commonwealth Government's arguments about the necessity of this heavy-handed legislation. The Government has

29 IAEA, Socio-economic and other non-radiological impacts of the near surface disposal of radioactive waste, IAEA technical document, September 2002. Quoted from Australian Conservation Foundation, *submission 125*, p. 8.

not made a compelling case for the urgency or heavy-handedness of the legislation. These bills are a display of arrogance on the Commonwealth Government's part and must be scrapped in favour of a proper consultative, scientific and inclusive process for a nuclear waste dump.

2.47 Opposition Senators urge the State and Territory Governments to recommence a co-operative process in order to resolve the issue of storage and management of nuclear waste in this country and to find the best possible site for this.

Recommendation

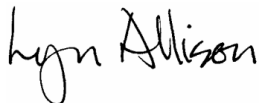
Opposition Senators recommend that the bills be rejected.

Senator Trish Crossin

Senator Anne McEwen

Australian Democrats' Report

The Australian Democrats support the remarks and recommendations of the Labor senators' report into the *Commonwealth Radioactive Waste Management Bill 2005* and *Commonwealth Radioactive Waste Management (Related Amendments) Bill 2005*. We have some additional concerns which we will raise in the debate on this bill.

A handwritten signature in black ink that reads "Lyn Allison". The signature is written in a cursive, flowing style.

Senator Lyn Allison
Australian Democrats

Appendix 1

List of submissions

Sub No:	From:
1	Ms Katherine Raymond, Vic
2	Ms Kim Stewart, Qld
3	Nico Hirzel, Vic
4	Dr Ian Matthews
5	Ms Cat Reimer, NSW
6	Gecko Canoeing NT
7	Ms Kylie Schubert, NT
8	Napier Road Weed Management Group
9	Mr Michael Cawthorn
10	Nfocus Pty Ltd
11	Ms Emma Russell, Vic
12	Mr Peter Lane, WA
13	Rev Jason John
14	Mr David Burrows, NSW
15	Mr Hugh Bland, NT
16	Oonagh Sherrard, NSW
17	Mr Euan Williamson, Vic
18	Sasha Johnson, SA
19	Mr Michael Bennett
20	Mr Daniel Murden
21	S Sunners
22	Ms Naomi Blackburn

- 23 Mr Graham Wells, NT
- 24 Ms Kathleen Winter, WA
- 25 Ms Rachael Barritt, NT
- 26 Taylor Fishlock, NT
- 27 Ms Kate Festing, NT
- 28 Khya Holland, NT
- 29 Mr Bruce Swain
- 30 Ms Margaret Graves, Qld
- 31 Ms Emma Rush, ACT
- 32 Mr James Cocking
- 33 Ms Louise Morris, Vic
- 34 Mr Martin Frank, NSW
- 35 Ms Ruth Zeibots, NSW
- 36 Mr Wayne Reid, Qld
- 37 Ms Ruth O'Neill
- 38 Mr Cynan Dowling
- 39 Mr Bill Daw, NT
- 40 Ms Lyndall McSween, NT
- 41 Mr Mark McMillan, NT
- 42 Robyn Aldrick, Vic
- 43 Neriman Osman, NSW
- 44 Ms Carole Perry
- 45 Ms Samantha McKay, NSW
- 46 Mr Greg Macmillan, Vic
- 47 Ms Vicki Gordon

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- 48 Mr Michael Erbacher, Qld
- 49 Mr Martin Prichard, WA
- 50 Dr Monica Nugent, NSW
- 51 Dr Leonie van der Maesen
- 52 Ms Catherine Blakey, NSW
- 53 Gerry Wood MLA
- 54 Ms Hazel Wilson, NSW
- 55 Dr Ian Holland, ACT
- 56 Ms Margaret Bradford, NSW
- 57 Ms Bryney Rollison
- 58 Mr Liam Sorrell
- 59 Mr Mervyn Murchie, NSW
- 60 Mr Peter Hopper, NSW
- 61 Mr Jonathan Stanger, Vic
- 62 Mr Dale Pfennig
- 63 Mrs Clair O'Brien, NT
- 64 Mr Nigel and Mrs Kathryn Olliver, NT
- 65 Mr Joel Williams, SA
- 66 Mr Brian Johnson
- 67 Alex Blue, SA
- 68 Pat Finegan, Vic
- 69 Arid Lands Environment Centre NT
- 70 Ms Chrissy Harris, NT
- 71 Ms Joan Kinnane, Qld
- 72 Ms Donna Lobartolo

- 73 Ms Angela Milthorpe, NT
- 74 Ms Kathleen Hawley, Vic
- 75 Mr Arnold Ward, SA
- 76 Ms Rosalind Byass, Vic
- 77 Ms Rachel Dixon, NT
- 78 Mr Peter Gibson
- 79 Ms Jackie Wurm, NT
- 80 Mr Peter Gringinger, Vic
- 81 Ms Renee Lees, NT
- 82 Mr Stephen McMahon, Vic
- 83 Ms Judith Burke, NT
- 84 Neylan Aykut, Vic
- 85 Ms Davina Hornsby, NT
- 85A Katherine Nuclear Dump Action Group NT
- 86 Mr Gary Fry, NT
- 87 Mr James Townley, NSW
- 88 HJ Versluis, WA
- 89 Dragonflies Playgroup, NT
- 90 Ms Petra Dunn, Qld
- 91 Ms Cherrie Eaton, NSW
- 92 Ms Kathryn Bannister, NT
- 93 Ms Celina Huebner, Katherine High School
- 94 Ms Pam Acres
- 95 Ms Georgi Stone, WA
- 96 Ms Jessica Canning, NT

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- 97 Lois AchimoVich
- 98 Mr Roy Hayles, SA
- 99 Mr Michael Cavanagh, NSW
- 100 Mr Barry Adams, NT
- 101 Mr Rodney Metcalfe, NT
- 102 Mr Richard Peter, NT
- 103 Ms Beverley Grace, NT
- 104 Ms Roseanne Stevens, NT
- 105 Ms Kerry Baldissera, NT
- 106 Nfanwy Welsh, NT
- 107 Ms Leanne McGill and Mr John Humphries, NT
- 108 Mr John Green
- 109 Katherine Region Tourist Association, NT
- 110 Barry and Valerie Utley, NT
- 111 Andre Steyl, WA
- 112 Mr Christopher Moore, WA
- 113 Mr Zach Worrall, Vic
- 114 Dr. Mark Zirnsak, Uniting Church in Australia
- 115 Mr Adam Dempsey, Vic
- 116 Mr Philip Thurstun, NSW
- 117 Northern Territory Government NT
- 118 Arrente Nations Campaign
- 119 Mr Joel Catchlove, SA
- 120 Bonnie Wykman, WA
- 121 Ms Eve Hofstetter, NSW

- 122 Katherine Landcare Group NT
- 123 Alice Springs Town Council NT
- 124 Northern Land Council NT
- 125 Australian Conservation Foundation Vic
- 126 Department of Education, Science and Training
- 127 The Environment Centre NT Inc
- 128 Ms Mia Trujillo, Vic
- 129 Mr Bruce Thompson, Vic
- 130 Mr Andrew Broffman, NT
- 131 Mr Joe Neyens
- 132 Environmental Defenders Office (NT) Inc NT
- 133 Mr Jon Lamb, NT
- 134 Ms Margaret Reynolds, Vic
- 135 Conservation Council of Western Australia Inc. WA
- 136 Ms Barbara Molanus
- 137 Mr Rob Knight MLA, Member for Daly
- 138 Mr Jamie Lander (and many others in Alice Springs)
- 139 Ms Lyndall McCormack, Zerowaste Action Group and a member of PANR and Secretary of The Sustainability Club NSW
- 140 Ms Margaret Airoldi, Qld
- 141 Mr Stuart Braun, Vic
- 142 Mr George LaSette, NT
- 143 Lori Martin, NT
- 144 Central Land Council
- 145 Ms Simone Siracusa, Vic

146	Mr Rob Wesley-Smith
147	Ms Susanna Bady,Alice Action NT
147	Ms Shelley Reid, Vic
148	Ms Leonie Chester, Vic
149	Mr Darren Turner, SA
150	Name withheld
151	Ms Tanya Dann, NT
152	Mr Brian T Manning, NT
153	Ms Christine Moore
154	Ms Christine Fensham, Qld
155	Mr Shin Furuno, Qld
156	Dr Beth Schultz, WA
157	Ila Marks, Vic
158	Mr Shaun Metcalf, NT
159	Mr Hugh Tilbrook, NT
160	Katherine Town Council NT
161	Sunshine Coast Environment Council Inc. Qld
162	Ms Danielle Blackie, NT
163	Mr Lam Keelah, NSW
164	Ms Pauline Fitzgerald, NT
165	Ms Carolyn Powell, NT
166	Mr Patrick O'Leary
167	Interim Student Representative Council, Vic
168	Ms Pru Gell
169	Ms Michaela Stubbs, Vic

- 170 Darwin No Waste Alliance
- 171 Ms Karina Castan, Vic
- 172 Ms Christine Hooper, Vic
- 173 Ms Sarah Brown, NT
- 174 Ms Georgette Billeh
- 175 Ms Emily Beresford
- 176 Ms Sue McKinnon
Convenor, NT Greens NT
- 177 Australian Student Environment Network, Vic
- 178 Ms Carly Franklyn, NT
- 179 Ms Esther Huber, NT
- 180 Ms Sonja Butcher, NT
- 181 Alex and Petrena Ariston (Katherine residents)
Luke and Ginger Ariston and Laura Metcalf (Pine Creek)
Kay and Ken Metcalf (Katherine residents), NT
- 182 Mr Jeff Syme, NT
- 183 Ms Irene Schardijn, Vic
- 184 Ms Eleanor Smith, Qld
- 185 Southland Shire Environment Centre, NSW
- 186 Lhere Artepe Aboriginal Corporation
- 187 Ms Patricia Collins MPIA
- 188 Mr Barry Parsons, WA
- 189 Ms Meaghan Johnston, NT
- 190 Public Health Association of Australia Inc ACT
- 191 Ms Judith Cullity, WA
- 192 Ms Jenny Sharp, NT

-
- 193 Community Recreation Outreach project
Leisure and Cultural SerVices, Vic
- 194 Mr Ross Muir, NT
- 195 Jo Boniface, NT
- 196 Mr Rossy Ross, NT
- 197 Mr Chris Howard, NT
- 198 Ms Amy Domaschenz, NT
- 199 Mr Ian Cohen MLC, The Greens NSW
- 200 Mr Matthew Coffey, NT
- 201 D.M. Rovera, Qld
- 202 Mr Steve Eland, NT
- 203 Ms Julie Garratt, NT
- 204 Mr Duncan Stitfold, NT
- 205 Ms Bonita Moss, NT
- 206 Ms Lorraine Dixon, NSW
- 207 Pat Bradley, NT
- 208 Danika Tager, Qld
- 209 Mr Eric Myhill, Vic
- 210 Association for Prevention of War (Australia)
- 211 Ms Natalie Wasley, WA
- 212 Administrative Review Council, ACT
- 213 The Federation of Australian Scientific and Technological
Societies, ACT
- 214 Mr John Noonan BSc(Hons), Grad. Dip. Env. Science, MEM,
NSW
- 215 Mr Paul Fogarty, Vic
- 216 Ms Bernardine Atkinson, NT

- 217 Mr Piet van Zon
- 218 Ms Anne Goddard
- 219 Kris Keogh, NT
- 220 D McKay
- 221 Ms Kate Costigan, NT
- 222 Ms Julia Osborne, NSW
- 223 Ms Tracey Duldig, NT
- 224 Ms Ariel Dyson, Vic
- 225 Mr Nick Hogarth, NT
- 226 Ms Lisa Mary
- 227 Ms Shelley Reid, Vic
- 228 Lesley Sammon, NSW
- 229 Mr Elliot Brennan, Vic
- 230 Ange Parrish, Vic
- 231 Mr Wirilma Mununggurr, NT
- 232 Mr Chris Jonkers, NSW
- 233 Ms Mary Cusacks

Appendix 2

Hearings and witnesses

Health Services, Northern Territory

Dr David Ashbridge, *Assistant Secretary*

Department of the Chief Minister, Northern Territory

Ms Clare Martin, *Chief Minister, Northern Territory*

Mr Tim Joyce, *Senior Policy Officer*

Department of Natural Resources, Environment and the Arts, Northern Territory

Mr David Ritchie, *Chief Executive Officer*

Katherine Nuclear Dump Action Group

Ms Joan Callister, *Member*

Ms Davina Hornsby, *Chairperson*

Ms Kerry Spain, *Member*

Katherine Landcare Group

Ms Sharon Hillen, *Vice-President*

Mr Daniel Knight, *Member for Daly, Northern Territory Legislative Assembly*

Yeltu Park

Mr Barry Utley, *Co-owner*

Mrs Valerie Utley, *Co-owner*

Northern Land Council

Mr John Daly, *Chairman*

Mr Norman Fry, *Chief Executive Officer*

Mr Ron Levy, *Principal Legal Officer*

Mr John Sheldon, *Senior Policy Officer*

Northern Territory Minerals Council Inc

Ms Kezia Purick, *Chief Executive*

Australian Radiation Protection and Nuclear Safety Agency

Dr John Loy, *Chief Executive Officer*

Alice Springs Town Council

Mr Mark Blackburn, *Director Corporate and Community Services*

Mr Rex Mooney, *Chief Executive Officer*

Mrs Melanie Van Haaren, *Alderman*

Mr Gerry Wood, *Member for Nelson, Northern Territory Legislative Assembly*

Arid Lands Environment Centre Inc.

Mr John Brisbin, *Coordinator*

Dr Peter Tait, *Public Officer*

Australian Conservation Foundation

Mr David Sweeney, *Nuclear Campaigner*

Environment Centre of the Northern Territory

Mr Peter Robertson, *Coordinator*

Australian Nuclear Science and Technology Organisation

Dr Ron Cameron, *Director, Government and Public Affairs*

Department of Education, Science and Training

Mr Patrick Davoren, *Director, Radioactive Waste Management, Science and Technology Policy Branch*

Mr George Giffing, *Principal Government Lawyer, Legislation Section*

Mr Robert Hesterman, *Assistant Director, Radioactive Waste Management Section*

Mr Stephen Irwin, *Branch Manager, Science and Technology Policy Branch, Science Group*

Appendix 3

Tabled documents

Hearing: Canberra, Tuesday, 22 November 2005

Department of Education, Science and Training – Media Release
Co-operation needed on Radioactive Waste Repository

Appendix 4

IAEA categories of radioactive waste 1

Waste Type	Definition
Low level waste	Contains enough radioactive material to require action for the protection of people, but not so much that it requires shielding during handling, storage or transportation.
Intermediate level waste, short-lived	Waste which requires shielding, but needs little or no provision for heat dissipation and contains low concentrations of long-lived <u>radionuclides</u> (less than 4000 <u>Becquerel</u> /gram of <u>alpha-emitters</u>). The radionuclides generally have a half-life of less than thirty years
Intermediate level waste, long-lived	Waste that requires shielding, but needs little or no provision for heat dissipation. The radionuclides generally have a half life of more than thirty years.
High level waste	Waste which contains large concentrations of both short- and long-lived radionuclides and is sufficiently radioactive to require both shielding and cooling. The waste generates more than 2 <u>kilowatts</u> of heat per cubic metre.

1 From DEST website:
http://www.radioactivewaste.gov.au/australia_and_radiation/amounts_of_radioactive_waste_in_australia.htm

Appendix 5

Australia's radioactive waste inventory¹

Table 1: Current inventory and estimated annual arisings of low level and short-lived intermediate level waste

Waste Producer	Typical Waste	Estimated Current Volume (m ³)	Estimated Future Annual Waste Arisings (m ³)
ANSTO	Laboratory equipment - clothing, paper and glassware	1320	30
States & territories	Industrial gauges, exit signs, smoke detectors, medical sources, hospital waste which includes clothing, paper and glassware	160	5 - 10
CSIRO	Contaminated soil from research into radioactive ores in the 1950s and 1960s	2010	-
Defence	Electron tubes, radium painted watches, compasses, sealed sources	210	<5

In addition to the information listed in the table above, low level and short-lived intermediate level waste will be generated by the decommissioning of the High Flux Australian Reactor (HIFAR) and the replacement research reactor. Depending on the

1 From DEST website:

http://www.radioactivewaste.gov.au/australia_and_radiation/amounts_of_radioactive_waste_in_australia.htm

decommissioning options chosen, between 500 and 2,500 cubic metres of waste will be generated by the decommissioning of each reactor.

Long-lived intermediate level waste

Australia holds approximately 500 cubic metres of long-lived intermediate level radioactive waste. This includes waste from the production of radiopharmaceuticals wastes from mineral sands processing, and used sources from medical, research and industrial equipment.

Table 2: Current inventory of long-lived intermediate level waste

Waste Producer	Typical Waste	Estimated Current Volume (m³)
ANSTO	Target cans, alumina columns, used control arms, aluminium end pieces, solidified liquid waste – from reactor operation and research, and radioisotope production	205
Industry – historical waste	Thorium and uranium residues from mineral sands processing	165
States & territories	Used sources from medical, industrial and research equipment	100
Other Australian Government agencies	Used sources from medical and research equipment	35

Table 3: Estimated future annual arisings of long-lived intermediate level waste

Waste Producer	Typical Waste	Estimated Future Annual Waste Arisings (m³)
ANSTO – 2000-2005	Target cans, alumina columns, used control arms, aluminium end pieces, solidified liquid waste	1.53
ANSTO – post-2005	Target cans, alumina columns, used control arms, aluminium end pieces, solidified liquid waste	1.62
States & territories – 2000 onwards	Sealed sources from medical and research equipment	2
Other Australian Government agencies – 2000 onwards	Sealed sources from medical and research equipment	1

Table 4: Estimated future arisings of long-lived intermediate level waste generated by the decommissioning of HIFAR and the replacement research reactor

Waste Producer	Typical Waste	Estimated Future Waste Arisings (m³)
ANSTO – HIFAR, estimated date 2035	Core support structure	5
ANSTO – HIFAR, by 2020	Packaged reprocessed waste in cement	20
	Vitrified residues and compacted waste	6
ANSTO – replacement research reactor, estimated date 2075	Core support structure	<5
ANSTO – replacement research reactor, after 2025	Vitrified residues and compacted waste	20

