

SUBMISSION RE PROPOSED NOMINATION OF NAPANDEE (KIMBA, SA) FOR A NATIONAL NUCLEAR WASTE DUMP AND STORE

by Friends of the Earth Australia
nuclear.foe.org.au

22 October 2021

Contents:

1. Introduction
2. NHMRC: No Radioactive Waste Repositories on Farming Land
3. Economic and Employment issues
4. Long-Lived Intermediate-Level Waste (LLILW)
5. National Radioactive Waste Management Act 2012
6. South Australian legislation banning Radioactive Waste Dumps
7. Independent Assessment and Inquiry
8. Conclusion

1. INTRODUCTION

This submission is in response to the federal government proposal regarding the possible establishment of a national radioactive waste facility near Kimba in South Australia. This plan should not be further advanced. Instead the federal government should adopt extended interim federal storage to enable a dedicated National Commission or comparable public inquiry mechanism to thoroughly investigate all options for the future management of Australia's radioactive waste.

Previous, failed attempts to establish a Commonwealth radioactive waste facility (repository and store) assumed the need for off-site, centralised facilities. This assumption continues with the current project configuration. However, a closer examination indicates both that this assumption may not be warranted and that there are major information gaps that need to be addressed before informed – and lasting – decisions should be made.

The Government should adopt a more nuanced approach which may allow it to make progress in a contested public policy area where previous governments have failed. This approach would involve:

1. Differentiating waste that needs to be moved vs. waste that does not need to be moved. This is consistent with the net-benefit clause in the Australian Radiation Protection and Nuclear Safety Act – the ARPANS Act. This in turn would require a more detailed inventory than has been compiled to date and consideration of issues (detailed in a

November 2014 civil society briefing paper¹) such as the number of legacy waste sites and the adequacy/inadequacy of existing storage sites. The failure to actively address these basic issues has worked against progression to the resolution of this contentious public issue in recent decades.

2. Differentiating waste arising from the operations of the Australian Nuclear Science and Technology Organisation (ANSTO) from non-ANSTO waste. ANSTO is quite capable of managing its own waste, at least in the medium term.² Permanent disposal of ANSTO waste should be explored and addressed in subsequent decades, keeping in mind that ANSTO is likely to be operating at its current site for many decades to come. Importantly, the current national facility proposal at Kimba explicitly does not seek to dispose of ANSTO's most problematic radioactive wastes.

3. Differentiating low level radioactive wastes (LLW) from long-lived intermediate-level waste (LLILW). Plans to move LLILW from Lucas Heights (and elsewhere) to an above-ground store co-located with the LLW repository, and then to an unspecified site at an unspecified later date, make no sense from a policy perspective and they significantly raise public-acceptance obstacles. At best, the current co-location proposal would mean double handling i.e. transport to the interim national store then future transport to a currently non-determined disposal site. Such an approach would be likely to fail a genuine net-benefit test as it would involve a net increase in public health and environmental risks.

The Howard Government abandoned plans for co-location in 2001 and thus decoupling the management approach is by no means a radical proposal.

2. NHMRC: NO RADIOACTIVE WASTE REPOSITORIES ON FARMING LAND

The National Health and Medical Research Council's (NHMRC) 1992 'Code of practice for the near-surface disposal of radioactive waste in Australia' lists the following criterion (among others) for a repository for the 'near-surface disposal of radioactive waste':

*"the site for the facility should be located in a region which has no known significant natural resources, including potentially valuable mineral deposits, and **which has little or no potential for agriculture or outdoor recreational use**"³ (emphasis added)*

The Kimba sites do not meet that criterion and should be rejected for that reason alone.

¹ Friends of the Earth, Beyond Nuclear Initiative, Australian Conservation Foundation, November 2014, 'Responsible Radioactive Waste Management in Australia: The Case For An Independent Commission Of Inquiry', www.archive.foe.org.au/sites/default/files/Responsible%20Radioactive%20Waste%20Management%20-%20The%20need%20for%20an%20Inquiry-Final.pdf

² Friends of the Earth, Beyond Nuclear Initiative, Australian Conservation Foundation, November 2014, 'Responsible Radioactive Waste Management in Australia: The Case For An Independent Commission Of Inquiry', www.archive.foe.org.au/sites/default/files/Responsible%20Radioactive%20Waste%20Management%20-%20The%20need%20for%20an%20Inquiry-Final.pdf

³ NH&MRC, 1992, Code of practice for the near-surface disposal of radioactive waste in Australia, www.arpansa.gov.au/pubs/rhs/rhs35.pdf

It is disturbing to note that the Howard government breached the NHMRC's Code of Practice with shallow burial of long-lived, plutonium-contaminated waste at Maralinga. Shallow burial of long lived waste is explicitly rejected by the NHMRC's Code of Practice. Moreover, shallow burial of long-lived, plutonium-contaminated waste would not be tolerated in the USA, the UK and other countries.

Community concerns are in no way assuaged in a context where a previous federal government breached the NHMRC Code of Practice and the current government is not acting consistently with the Code. This indicates that expert advice and clear standards are subservient to political imperatives.

There is a real need to ensure consistency with the best international industry practise and standards to restore community confidence and procedural and regulatory credibility.

3. ECONOMIC AND EMPLOYMENT ISSUES

Regional employment and economic benefits have been an important driver in the promotion of and discourse surrounding the national radioactive waste facility project, however often these have been overstated. The Howard government stated that there would be zero permanent jobs at its proposed repository site near Woomera. The government-commissioned PR company Michels Warren said: "The National Repository could never be sold as "good news" to South Australians. There are few, if any, tangible benefits such as jobs, investment or improved infrastructure."

When attention later focused on the Muckaty site in the NT, successive governments said there would be six security jobs at the site and no other permanent jobs. Work would be available when waste was transferred to the facility, but there was no expectation that it would involve locals, and waste transfers to the site were only anticipated infrequently (perhaps once every 3–5 years).⁴

The government is promising 45 jobs at Kimba, three times its earlier claim that there would be 15 jobs at the proposed facility. This is the breakdown of the 45 jobs:

- 14 – security and safeguards
- 13 – waste operations and technicians
- 8 – site management and community outreach
- 5 – environmental protection and quality control
- 5 – safety and radiation protection

That estimate of 45 jobs comes with caveats: "the final workforce design and structure will be based on a number of factors including advice from security agencies, the views of the independent regulator and the details of the final business case, with inputs from across government."

⁴ The Department of Education, Science and Tourism said in 2003 that ANSTO "is unlikely to seek the holding of frequent campaigns to disposal of waste holdings generated after the initial campaign." Application to ARPANSA, 2003, Vol.iii Ch.9 Waste – Transfer and Documentation p.5.

Is the estimate of 45 jobs credible? Not if overseas radioactive waste facilities are any guide. The Centre de Stockage de l'Aube (CSA) radioactive waste facility in France handles over 200 times more waste per year compared to the proposed facility in SA yet it employs only four times as many staff as the proposed facility in SA.⁵ CSA processes 73 cubic metres (m³) per employee per year (13,164 m³ / 180 staff).

The El Cabril radioactive waste facility in Spain has a staff of 137 people and processed an average of 1,395 m³ per year from 1993 to 2016. That equates to 10.2 m³ per employee per year.

Yet the Australian government estimates a workforce of 45 people to process 45 m³ per year: 1 m³ per employee per year compared to 10.2 in Spain and 73 in France. The government evidently has a dim view of the productivity of Australian workers, or, more likely, its jobs estimate is grossly inflated.

Measuring jobs-per-employee doesn't account for some jobs required whether a facility processes 1 m³ or 1 million m³ per year: administration, security and so on. As a government official stated: "There are a base number of jobs related to the management of the waste which are not linear with volume and a number of jobs that would scale with larger volumes."

Nevertheless, productivity at the proposed Australian facility would be dramatically lower than comparable facilities overseas.

If we assume that Australia matched the lowest of the figures given above – 10.2 m³ per employee per year at El Cabril in Spain – then the staff at an Australian facility would be processing waste for just one month each year and they'd have 11 months to play table-tennis or X-box or whatever.

The current government might be willing to pay 45 staff to do nothing for 11 months each year, but it's not a sustainable situation. The Department of Finance wouldn't tolerate it. If staff at the waste facility are paid by the federal government to do nothing for most of the time, what sort of a precedent does that set, and why shouldn't the rest of us be paid to do nothing for 11 months out of 12 at a cost to taxpayers of several million dollars each year?

Almost certainly, staffing would be dramatically culled. Almost certainly, a future government would revert to the plan pursued by previous governments: keeping the waste facility closed most of the time, and opening it occasionally for waste disposal and storage. In the jargon, this is called a campaign-based approach with occasional waste disposal 'campaigns'.

Previous governments said that waste would be sent to the facility just once every 3–5 years. For example, the government said in 2003 that waste would be transferred to the

5

https://d3n8a8pro7vhmx.cloudfront.net/conservationsa/pages/9910/attachments/original/1534679998/Down_In_the_Dumps.pdf

facility just once every five years: "It is considered for planning purposes that an average period of 5 years between campaigns will be appropriate" (Volume III of DEST application to ARPANSA, Ch.9, 'Waste – Transfer and Documentation', p.5).

In an attack on Friends of the Earth for questioning its estimate of 45 jobs, the Department of Industry, Innovation and Science said it was unable to locate any previous government documents regarding periodic, campaign-based plans.⁶ The federal government can't find federal government documents? Seriously?

The government says that it wants continuous operation of the repository (for reasons unexplained) rather than a periodic, campaign-based approach. But even so, the government only plans to shift waste to the facility once or twice each year according to a 2016 document.⁷ A July 2018 government document states: "This facility will be an operational facility and not as some have suggested, a minimally crewed warehouse to be opened once or twice a year."⁸ But it is the government itself which says that waste will only be transported to the facility once or twice each year!

It is plausible that 45 jobs will be maintained while the backlog of radioactive waste is transported to Kimba and processed. Beyond that, it is implausible.

Compensation package and mistreatment of Traditional Owners

The government is promising a \$31 million compensation package for the community around the chosen site for the waste facility. The government is preying on people's worst instincts, asking them to put their own short-term interests ahead of the interests of future generations. The compensation amounts to a little over \$100,000 each year over the 300-year lifespan of the waste facility. That amount of money would impact on the life of an individual or a family – but it will do next to nothing to improve a regional community.

And of course the funding won't be spread evenly over 300 years – it will likely be gone within a decade and future generations will see none of it.

The \$31 million includes "up to \$3 million for indigenous skills training and cultural heritage protection." As the Australia Institute notes, that sum is not much greater than the amount of money cut from the Aboriginal Drug and Alcohol Council in Port Augusta in 2018, and it is negligible compared to cuts in recent years such as the May 2017 cut of \$147 million over four years from Indigenous Business Australia, or the May 2014 cut of \$534 million over four years from indigenous programs.⁹

⁶ It was posted at this link but appears to have been removed ... or the URL has changed:

<https://radioactivewaste.gov.au/news/response-dr-jim-green>

⁷

<http://www.radioactivewaste.gov.au/sites/prod.radioactivewaste/files/files/Barndioota%20Info%20Pack%20Feb%202016.pdf>

⁸ <http://radioactivewaste.gov.au/news/response-dr-jim-green>

⁹

https://d3n8a8pro7vhmx.cloudfront.net/conservationsa/pages/9910/attachments/original/1534679998/Down_In_the_Dumps.pdf

It is a disgrace that the government is pursuing the Kimba site despite the clear opposition of Barngarla Traditional Owners and their representative body, the Barngarla Determination Aboriginal Corporation. It is a disgrace that the government excluded Barngarla Traditional Owners from the 'community ballot'.

In April 2020, Federal Parliament's Joint Committee on Human Rights noted the unanimous opposition of the Barngarla Traditional Owners and it noted that the Amendment Bill does not sufficiently protect the rights and interests of Traditional Owners and that "there is a significant risk that the specification of this site will not fully protect the right to culture and self-determination." Importantly, the Human Rights Committee's report was unanimous and was endorsed by Liberal and National Party members as well as Labor members.

Construction cost estimates

The Australia Institute report also questions construction cost estimates: "An earlier announcement had the construction cost at \$100 million, with a workforce of 15 people. A year later both the construction cost and workforce have tripled – to \$325 million and 45 people – without any change in the basic scope of the project."¹⁰

As with the job estimates, the estimated construction cost is wildly divergent when compared to overseas facilities. The Australia Institute report states:

"Canada is planning a radioactive waste storage facility at Chalk River, Ontario, that is orders of magnitude bigger ... The proposed Canadian facility is more than one hundred times larger, more complex with its underground storage and ancillary facilities, yet its planned construction cost is just CAD\$215 million (AUD\$222 million), with a CAD\$5.5 million operating cost (AUD\$5.7 million). ...

"The economic puzzle here is how a facility one hundred times smaller, with fewer ancillary functions, costs 50% more to construct and operate? Either these costs are orders of magnitude too high, or the proposed radioactive waste storage facility is orders of magnitude larger than required to handle Australia current and foreseeable future radioactive waste over the next century."¹¹

4. LONG-LIVED INTERMEDIATE-LEVEL WASTE (LLILW)

The Department of Industry, Innovation and Science's public newsletter (Issue No. 8, April 2017) stated that ANSTO is licensed by ARPANSA "to store waste on a temporary basis and on the condition that a plan is developed by the end of the decade for a final disposal pathway for its waste."

¹⁰

https://d3n8a8pro7vhmx.cloudfront.net/conservationsa/pages/9910/attachments/original/1534679998/Down_In_the_Dumps.pdf

¹¹

https://d3n8a8pro7vhmx.cloudfront.net/conservationsa/pages/9910/attachments/original/1534679998/Down_In_the_Dumps.pdf

Many stakeholders have sought clarification on the status of final disposal plans for long-lived intermediate-level waste (LLILW) but little detail has been provided. The Department has been repeatedly asked:

Can the Department/Minister advise as to progress developing a plan for a final disposal pathway for long-lived intermediate-level waste?

Does the Department/Minister expect to have a plan in place for final disposal of long-lived intermediate-level waste by the end of the decade?

These questions were asked through the Senate Estimates process where it was evident the Government has little idea how LLILW will be disposed of, or when this might happen. Mr Bruce Wilson from the Department of Industry, Innovation and Science said on 1 June 2017 that "we have not commenced a process to identify a permanent disposal solution for the long-lived intermediate-level waste".¹²

Despite this the Department routinely states that LLILW stored at any national facility would be relocated in a number of decades, often citing between 20 and 30 years. This inconsistency is undermining community confidence in the national facility proposal and process.

The former National Store Committee – which considered options for disposal of LLILW – was disbanded in 2004 and the Government's current efforts towards final disposal of LLILW amount to nothing more than keeping a watching brief on developments overseas. The Department of Industry, Innovation and Science has expressed interest in deep borehole disposal of LLILW. Mr Bruce Wilson was referring to deep borehole disposal with these comments to Parliament's Economics Legislation Committee on 1 June 2017: "The potential technological solutions for that are evolving, and there are potential other new technologies which might reduce the cost to Australia of a disposal solution – if they are proven to be effective and safe. They will be proved up over the next decade or so."¹³

However, deep borehole disposal will not be "proved up over the next decade or so."

The technology has barely reached the experimental stage overseas and there is little chance that it will provide a viable option – let alone a demonstrated, proven option – in any meaningful timeframe and certainly not over the next decade or so. *Associated Press* reported that the "U.S. Department of Energy is abandoning a test meant to determine whether nuclear waste can be buried far underground because of changes in budget priorities, the agency said Tuesday. A spokeswoman said in a statement that the agency

¹² Economics Legislation Committee, Department of Industry, 1 June 2017, http://parlinfo.aph.gov.au/parlInfo/download/committees/estimate/e3ddf88b-3e9c-4546-9d90-8f646689a98c/toc_pdf/Economics%20Legislation%20Committee_2017_06_01_5134.pdf;fileType=application%2Fpdf

¹³ Economics Legislation Committee, Department of Industry, 1 June 2017, http://parlinfo.aph.gov.au/parlInfo/download/committees/estimate/e3ddf88b-3e9c-4546-9d90-8f646689a98c/toc_pdf/Economics%20Legislation%20Committee_2017_06_01_5134.pdf;fileType=application%2Fpdf

doesn't intend to continue supporting the Deep Borehole Field Test project, which was meant to assess whether nuclear waste could be stored in approximately three-mile-deep holes."¹⁴

Mr Wilson told the Economics Legislation Committee on 1 June 2017 that "by the time we come to them [affected communities] with a firm proposal for what this facility will look like – which will be sometime next year – we will be able to tell them, with clarity, what the options are on the intermediate level waste that might be stored there ..."¹⁵

However, there is still no clarity on LLILW disposal. The government has no idea what that might involve, where that might happen or when it might occur – and is making no serious effort to progress the matter.

The alternative to deep borehole disposal is deep geological disposal. There is not a single operating deep geological disposal site for spent nuclear fuel / high-level nuclear waste anywhere in the world. The one and only operating deep geological disposal site in the world – the Waste Isolation Pilot Plant (WIPP) in New Mexico, USA, for LLILW military-origin waste – was closed for three years after a chemical explosion in February 2014.

As for the timelines involved, the government states that the intention is to store LLILW above-ground in the Kimba region or the Flinders Ranges for "several decades".¹⁶ Yet the regulator ARPANSA has repeatedly flagged a much longer timeline:

- ARPANSA states in its May 2017 'Information for Stakeholders' document that the proposed above-ground LLILW store (at Kimba or the Flinders Ranges) "may be operational for more than a century".¹⁷
- ARPANSA states in its May 2017 'Regulatory Guide' document that the proposed above-ground LLILW store (at Kimba or the Flinders Ranges) "may be operational for more than a century".¹⁸
- The ARPANSA CEO said in May 2015 that: "This plan will have provision for ILW storage above ground for approximately 100 years."¹⁹

¹⁴ Associated Press, 24 May 2017, 'Trump administration dropping nuclear waste burial test', www.nationalobserver.com/2017/05/24/news/trump-administration-dropping-nuclear-waste-burial-test

¹⁵ Economics Legislation Committee, Department of Industry, 1 June 2017, http://parlinfo.aph.gov.au/parlInfo/download/committees/estimate/e3ddf88b-3e9c-4546-9d90-8f646689a98c/toc_pdf/Economics%20Legislation%20Committee_2017_06_01_5134.pdf;fileType=application%2Fpdf

¹⁶ Economics Legislation Committee, Department of Industry, 1 June 2017, http://parlinfo.aph.gov.au/parlInfo/download/committees/estimate/e3ddf88b-3e9c-4546-9d90-8f646689a98c/toc_pdf/Economics%20Legislation%20Committee_2017_06_01_5134.pdf;fileType=application%2Fpdf

¹⁷ ARPANSA, May 2017, 'Information for Stakeholders', www.arpansa.gov.au/pubs/regulatory/nrwmf/Rad-waste-info-for-stakeholders.pdf

¹⁸ ARPANSA, May 2017, 'Regulatory Guide: Applying for a licence for a radioactive waste storage or disposal facility', www.arpansa.gov.au/pubs/regulatory/guides/REG-LA-SUP-240A.pdf

¹⁹ ARPANSA CEO, 8 May 2015, 'Statement of Reasons', www.arpansa.gov.au/pubs/regulatory/ansto/SOR_operationIWS.pdf

Clearly there is a major disconnect between what the government is telling affected communities in Kimba and the information available in ARPANSA documentation. It is unreasonable to further advance the siting process given this fundamental lack of clarity in what is a pivotal project consideration.

Moving LLILW to an above-ground 'interim' store adjacent to a repository for lower-level wastes makes no sense given that much of the waste is currently located at ANSTO's Lucas Heights site, which is properly secured and home to much of Australia's nuclear expertise. ANSTO also enjoys considerably higher access to nuclear monitoring, security, waste management expertise and emergency response capacity than any other site in the nation.

Among other problems, the Government's current waste management strategy raises the spectre of transporting LLILW 1500+ kilometres to a store site near Kimba or in the Flinders Ranges, and potentially transporting it thousands of kilometres again from a store to a deep geological/borehole repository should such a facility be established.

The current plan for a LLILW store near Kimba should not be further advanced. In 2001, the Howard Government abandoned plans for co-location of a LLILW store with a repository for lower-level wastes and this is by no means a radical proposal.

5. NATIONAL RADIOACTIVE WASTE MANAGEMENT ACT 2012

The enabling legislation that underpins the federal government's approach is the National Radioactive Waste Management Act 2012 (NRWMA). This is unnecessarily heavy-handed legislation that gives the federal government the power to extinguish rights and interests in land targeted for a radioactive waste facility. The Minister must "take into account any relevant comments by persons with a right or interest in the land" but there is no requirement to secure consent.

Traditional Owners, local communities, pastoralists, business owners, local councils and State/Territory Governments are all disadvantaged and disempowered by the NRWMA.

The NRWMA has been criticised both in Senate Inquiries and through a Federal Court challenge to an earlier federal government attempt to site a national radioactive waste facility at Muckaty in the Northern Territory.

The NRWMA also puts the federal government's radioactive waste agenda above environmental protection obligations as it seeks to curtail the application of the *Environment Protection and Biodiversity Conservation Act 1999*.

The NRWMA needs to be radically amended or replaced with legislation that protects the environment and gives local communities and Traditional Owners the right to say 'no' to nuclear waste dumps.

A detailed March 2017 paper written by Monash University fifth-year law student Amanda Ngo provides further detail on the inadequacies of the NRWMA and the need to amend or repeal and replace the legislation.²⁰

Legislated Amendments to the NRWMA addressed none of the above-mentioned problems; indeed the government tried (but failed) to make the legislation worse by precluding judicial challenges.

6. SA LEGISLATION BANNING RADIOACTIVE WASTE DUMPS

South Australia – the only jurisdiction currently being considered as a potential host for a national radioactive waste facility has legislation banning the import, transport, storage and disposal of nuclear wastes – the Nuclear Waste Storage (Prohibition) Act 2000. The Act states: “The Objects of this Act are to protect the health, safety and welfare of the people of South Australia and to protect the environment in which they live by prohibiting the establishment of certain nuclear waste storage facilities in this State.”

It can only be assumed that the federal government's intention is to override the SA legislation just as the Howard Government tried – but failed – to do. Answers provided to a Parliamentary Question on Notice strongly indicate that the Federal Government does in fact intend to override SA legislation:²¹

Question (Senator Ludlam): Is the Department considering overriding the South Australian Nuclear Waste Storage (Prohibition) Act 2000, which prohibits the import, transport, storage and disposal of irradiated nuclear fuel wastes and other wastes intended for the NRWM Facility.

Response (Senator Canavan): The department is yet to consider its position with respect to the South Australian Nuclear Waste Storage (Prohibition) Act 2000. However, the department notes that the National Radioactive Waste Management Act 2012 (NRWM Act) already provides that State and Territory laws have no effect to the extent that they "regulate, hinder or prevent" activities authorised under the NRWM Act.

The federal government has often spoken of the voluntary nature of the current national radioactive waste management project. Any failure to respect existing state legislation would deeply undermine this claim and open the process to challenge. Such an approach would also be inconsistent with international industry practise and standards that clearly highlight the importance of inclusion and consent.

There is a body of academic and policy papers that talk about the importance of community consent, the need to take time and the need to recognise and respect opposition – not to see this as vexatious or ‘emotional’

²⁰ Amanda Ngo, March 2017, 'National Radioactive Waste Management Act 2012', <http://tinyurl.com/nrwma-2017> or <https://d3n8a8pro7vnm.cloudfront.net/foe/pages/199/attachments/original/1489231658/NRWM-A-Report-FINAL-March-2017.pdf>

²¹ Minister for Resources and Northern Australia, Senate, Question Number: 433. Date Asked: 29 March 2017

The UK Committee on Radioactive Waste Management found that “there is a growing recognition that it is not ethically acceptable for a society to impose a radioactive waste facility on an unwilling community”. The European Union Nuclear Decommissioning Best Practice guidelines state that experience “has shown that without this consent, the project will sooner or later be cancelled, stopped or indefinitely delayed – one way or the other”.

Further the UN Declaration on the Rights of Indigenous Peoples (Article 29) outlines that "States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent”.

The federal government should clearly and publicly state whether it intends to ignore, override or respect existing state legislation. Communities in the affected regions of Kimba and the Flinders Ranges should be clearly informed about the federal government’s intent.

7. INDEPENDENT ASSESSMENT AND INQUIRY

The case for a dedicated National Commission or comparable public inquiry mechanism to thoroughly investigate all options for managing Australia's radioactive waste, and a discussion on how that Commission might be constituted and the issues it might address, is detailed in a November 2014 paper co-authored by Friends of the Earth Australia.²²

An important, preliminary task needed to advance responsible radioactive waste management is to establish an accurate and up-to-date inventory of Australia's radioactive waste stockpiles. That must include consideration of the nature and adequacy/inadequacy of current storage conditions, and the nature and adequacy/inadequacy of institutional control.

Serious consideration of those issues is necessary if informed decisions about future waste management options are to be made, yet successive Governments have largely ignored these issues. For example, the Department of Industry, Innovation and Science's recent public newsletter (Issue No. 8, April 2017) states that "existing stores" for radioactive wastes "are nearing capacity at more than 100 sites across the country". The Department has been repeatedly asked to provide evidence to justify that assertion, however no detailed response has been forthcoming.

The existence of untested or unclear project assumptions and clear information deficiencies deeply undermines stakeholder confidence in the project and the wider government approach to radioactive waste management.

²² Friends of the Earth, Beyond Nuclear Initiative, Australian Conservation Foundation, November 2014, 'Responsible Radioactive Waste Management in Australia: The Case for An Independent Commission Of Inquiry', www.archive.foe.org.au/sites/default/files/Responsible%20Radioactive%20Waste%20Management%20-%20The%20need%20for%20an%20Inquiry-Final.pdf

Net-benefit principles are enshrined in the NH&MRC Code of Practice for the Near-Surface Disposal of Radioactive Waste in Australia²³ and in subsection 32(3) of the ARPANS Act.²⁴ Yet successive federal governments have made no effort to attempt to demonstrate a net benefit with their radioactive waste repository and LLILW store proposals.

Successive governments have assumed that a shallow, remote repository is the best solution for low-level radioactive waste (LLW). That assumption needs to be tested as no federal government has attempted to demonstrate the net benefit of a remote repository. Measured by radioactivity, a large majority of LLW is stored at ANSTO's Lucas Heights site; measured by volume, ANSTO manages about half the total volume. ANSTO expects to continue to operate at the Lucas Heights site for many decades into the future and it is by no means clear that a remote repository is preferable to ongoing storage at Lucas Heights, especially given the continuing uncertainty around the long-term future management options for LLILW.

It may be the case that ongoing storage at Lucas Heights is a preferable medium-term option for the following reasons:

- Australia's nuclear expertise is heavily concentrated at Lucas Heights;
- storage at Lucas Heights would negate risks associated with transportation over thousands of kilometres (moreover if LLW waste is moved out of Lucas Heights some decades into the future, it would be considerably less hazardous due to radioactive decay in the interim);
- security at Lucas Heights is far more rigorous than any proposed for a remote repository
- this approach would require producers of radioactive waste management to take increased responsibility for their own waste – a practise consistent with accepted waste minimisation principles.

Relevant government organisations (and others) have acknowledged that ongoing radioactive waste storage at Lucas Heights is a viable option:

- Dr Ron Cameron, ANSTO, when asked if ANSTO could continue to manage its own waste: "ANSTO is capable of handling and storing wastes for long periods of time. There is no difficulty with that. I think we've been doing it for many years. We have the capability and technology to do so."²⁵
- Andrew Humpherson, ANSTO: "Lucas Heights is a 70-hectare campus with something like 80 buildings. It's a large area. We've got quite a number of buildings there which house radioactive materials. They're all stored safely and securely and all surrounded by a high-security perimeter fence with Federal Police guarding. It is the most secure facility we have got in Australia."²⁶

²³ www.arpansa.gov.au/pubs/rhs/rhs35.pdf

²⁴ www.comlaw.gov.au/Series/F1999B00034

²⁵ ARPANSA forum, Adelaide, 26 February 2004, <http://web.archive.org/web/20040610143043/http://www.arpansa.gov.au/reposit/nrwr.htm#forum>

²⁶ September 2008, www.abc.net.au/news/2008-09-22/new-nuclear-waste-site-for-sydney/517372

- Dr Clarence Hardy, Australian Nuclear Association: "It would be entirely feasible to keep storing it [radioactive waste] at Lucas Heights ..." ²⁷
- Then ARPANSA CEO John Loy: "Should it come about that the national approach to a waste repository not proceed, it will be necessary for the Commonwealth to devise an approach to final disposal of LLW from Lucas Heights, including LLW generated by operation of the RRR [Replacement Research Reactor]. In the meantime, this waste will have to be continued to be handled properly on the Lucas Heights site. I am satisfied, on the basis of my assessment of the present waste management plan, including the license and conditions applying to the waste operations on site, that it can be." ²⁸
- Department of Education, Science and Tourism: "A significant factor is that ANSTO has the capacity to safely store considerable volumes of waste at Lucas Heights and is unlikely to seek the holding of frequent campaigns to disposal of waste holdings generated after the initial campaign." ²⁹

There have been sustained information deficiencies and errors and a lack of clarity regarding existing waste stores. Claims have repeatedly been made that waste stores are inadequate (e.g. hospital car-parks, filing cabinets and basements) to justify remote repository projects. One document released under Freedom of Information states that "none" of the waste "is stored satisfactorily" in existing stores. Yet then industry minister Ian Macfarlane said in September 2014 that current waste stores are "very, very safe". ³⁰

Likewise, a document released by Senator Nick Minchin, one of the Howard Government ministers responsible for radioactive waste management, stated: "The safety of the storage of radioactive waste is proven by the fact that there are fifty stores around Australia housing radioactive waste and there has never been an accident exposing a person to unsafe levels of radiation."

It is important to note that even while arguing that existing waste stores are inadequate, successive federal governments have shown no interest whatsoever in upgrading waste stores – including those that will continue storing waste even if an off-site disposal or storage option becomes available. The recent confirmation of a loss of storage integrity among drums of CSIRO low-level waste at the Woomera facility in South Australia highlights the consequences of such inattention. If a portion of the political and departmental effort that has gone into two decades of a search for a site had been applied to effective containment of existing wastes this would not have occurred. The fact that it has happened is unacceptable and has eroded community confidence as well as containers.

²⁷ ARPANSA forum, Adelaide, 26 February 2004, <http://web.archive.org/web/20040610143043/http://www.arpansa.gov.au/reposit/nrwr.htm#forum>

²⁸ April 2002, Decision by the CEO of ARPANSA on Application to construct the Replacement Research Reactor at Lucas Heights. Reasons for Decision", p.30.

²⁹ Application to ARPANSA, 2003, Vol.iii Ch.9 Waste – Transfer and Documentation p.5.

³⁰ www.sbs.com.au/news/article/2014/09/30/government-searching-nuclear-waste-site-time-runs-out

The Public Works Committee review tabled in federal Parliament in October 2021 demonstrated that extended interim storage at the existing ANSTO site is viable and prudent.³¹

8. CONCLUSION

The federal government should not further advance the proposal to establish a radioactive waste facility near Kimba. Instead the government should adopt extended interim storage, particularly of LLILW at ANSTO, and adopt a circuit-breaker in this stalled and contested policy arena through a National Commission or comparable public inquiry mechanism to investigate all options for advancing responsible future management of Australia's radioactive waste.

³¹ https://www.arpansa.gov.au/sites/default/files/arpansa_annual_report_2020-21.pdf