

## **SUBMISSION TO SENATE STANDING COMMITTEES ON ECONOMICS**

### **Selection process for a national radioactive waste management facility in South Australia**

**Friends of the Earth Australia**

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#### **1. Introduction**

Friends of the Earth Australia (FoE) welcomes the opportunity to provide a submission to this inquiry and would welcome the opportunity to appear at a hearing of the Senate Committee.

This submission comments on terms of reference (a) to (e). Comment is also provided on several issues under term of reference (f) 'any other related matters'. In this introduction we wish to draw attention to two vital issues: the grossly deficient National Radioactive Waste Management Act, and the alleged need for a central waste facility.

#### **National Radioactive Waste Management Act**

We wish to emphasise gross deficiencies in the National Radioactive Waste Management Act (NRWMA), the federal legislation governing the nuclear waste management process.

The NRWMA is grossly undemocratic and it systematically disadvantages Aboriginal people. There is little point in seeking to improve processes under the NRWMA when the overarching legislation is itself deeply flawed. Conversely, significantly amending the NRWMA would be a logical starting point for resolution of intractable waste management issues. **For those reasons, consideration of this issue should be central to the Committee's deliberations.**

It is noteworthy that in defending the government's decision to oppose this Senate Inquiry, the Assistant Minister to the Prime Minister said the government is assessing three sites in SA "following a voluntary and fully transparent, community-driven process, consistent with the National Radioactive Waste Management Act 2012."<sup>1</sup> Yet the government itself implicitly acknowledged serious flaws in the process by significantly amending it (for example compare the initial and subsequent nominations of sites near Kimba). Deficient processes have arisen from deficient legislation and the logical starting point to resolve the situation is to amend the legislation.

The NRWMA 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 disempowers Traditional Owners in multiple ways, including:

- The nomination of a site for a radioactive waste facility is valid even if Aboriginal owners were not consulted and did not give consent.
- The NRWMA has sections which nullify State or Territory laws that protect the archaeological or heritage values of land or objects, including those which relate to Indigenous traditions.
- The NRWMA curtails the application of Commonwealth laws including the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and the *Native Title Act 1993* in the important site-selection stage.
- The *Native Title Act 1993* is expressly overridden in relation to land acquisition for a radioactive waste facility.

The NRWMA also puts the federal government's radioactive waste agenda above environmental protection 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.

Further deficiencies in the NRWMA are discussed in a briefing paper written by Monash University fifth-year law student Amanda Ngo in 2017. Her paper, 'National Radioactive

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<sup>1</sup> Senator McGrath, 6 Feb 2018,

<http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22chamber%2Fhansards%2Ff182c94f-e016-456b-bd73-67b54deb4df9%2F0126%22>

Waste Management Act 2012', is posted at <http://tinyurl.com/nrwma-2017> and we urge Committee members to read the paper.

### **The alleged need for a centralised site and the absurdity of moving intermediate-level waste from Lucas Heights to a store adjacent to the planned repository.**

Much of the discussion around nuclear waste management in Australia assume the need for a centralised, remote waste management site. Yet successive governments have failed to demonstrate the need for a centralised site. This contradiction is most acute in regards to long-lived intermediate-level waste (LLILW) (including spent fuel reprocessing waste) currently stored at Lucas Heights.

Plans to move LLILW from Lucas Heights (and elsewhere) to an above-ground store co-located with the repository for lower-level wastes, 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 undetermined disposal site. Such an approach would fail a net-benefit test (as required under the ARPANS Act) as it would involve a net increase in public health and environmental risks. The government plans to increase public health and environmental risks, and increase public acceptance obstacles, for no logical, defensible reason whatsoever. The current Coalition government should revert to the policy of the previous Howard Coalition government and separate the processes for managing LLILW and lower-level waste.

Even if the Senate Committee is unwilling to systematically investigate the claimed need for a centralised repository and co-located LLILW store, the Committee should at the very least explore the absurd proposal to transport LLILW from Lucas Heights to a co-located store and thence to a disposal site which could be located in any of Australia's states or territories.

### **Sites other than those in SA.**

Sites other than those in SA (Flinders Ranges and Kimba) have progressed towards formal nomination – in particular, Leonora (WA) and Brewarrina (NSW). We urge the Senate Committee to consider submissions from local people and groups in those areas. Those sites are not further discussed in this submission but other submissions will alert the Committee to glaring process errors, such as a community survey initiated by the Brewarrina Council which made no mention of the words 'radioactive' or 'nuclear'.

## **2. The financial compensation offered to applicants for the acquisition of land under the nominations of land guidelines.**

The federal government is offering \$10 million for hosting the radioactive waste management facility. The facility will operate for approximately 300 years. Thus the compensation amounts to about \$33,000 per year, i.e. next to nothing. The \$10 million would likely be spent in a matter of years – so for decades and centuries the local community would have to deal with the risks and problems associated with the facility, with no compensation.

There has been discussion about states/territories paying for the use of the national radioactive waste facility but details are vague and it is inconceivable that that could amount to anything more than a negligible revenue stream given that total national radioactive waste generation amounts to approx. 45 cubic metres annually according to the federal government (40 cubic metres of low-level waste and 5 cubic metres of intermediate-level waste).<sup>2</sup>

The government's claims about job creation are implausible and we urge the Senate Committee to say so clearly in its report. From 1998-2004, the Howard government stated that there would be zero permanent jobs at its proposed national repository site near Woomera. 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 (once every 3–5 years).<sup>3</sup>

The current government position is that "at least 15 full-time equivalent jobs will be needed to operate the facility."<sup>4</sup> It is plausible that there might be 15 jobs in the initial stage as waste holdings are transferred to the site, processed/packaged and disposed of (or stored in the case of LLILW). However, it is implausible that 15 permanent jobs would be maintained beyond that initial phase given that waste transfers to the site would be low-volume and infrequent (once every three to five years). Annual generation of 45 cubic metres of waste could not sustain 15 jobs – the claim is absurd and the government should be held to account by the Senate Committee for raising false expectations.

### **3. How the need for 'broad community support' has played and will continue to play a part in the process, including: i) the definition of 'broad community support', and ii) how 'broad community support' has been or will be determined for each process advancement stage.**

Minister Matt Canavan suggested 65% as the marker for 'broad community support' but then continued with the Kimba sites even after an AEC survey determined that support fell considerably short of that level at 56%.

There seems little point in assessing the level of community support and opposition when the government simply shifts the goal-posts to suit its political purposes. This issue will arise again with the government's plan to formally survey local public opinion around nominated sites in August / September 2018.

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<sup>2</sup> 'Australia's radioactive waste', 2016, <http://web.archive.org/web/20150227091927/http://www.radioactivewaste.gov.au/radioactive-waste-australia/australias-radioactive-waste>

<sup>3</sup> 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.

<sup>4</sup> <http://radioactivewaste.gov.au/jobs-and-business-opportunities/job-opportunities>

#### **4. How any need for Indigenous support has played and will continue to play a part in the process, including how Indigenous support has been or will be determined for each process advancement stage.**

The treatment of Aboriginal people by the federal government has been disgraceful and there is no indication that this will change.

As mentioned, the National Radioactive Waste Management Act (NRWMA) systematically discriminates against Aboriginal people. The Senate Committee should recommend significant amendments to the overarching legislation which governs the process. The NRWMA disempowers Traditional Owners in multiple ways, including:

- The nomination of a site for a radioactive waste facility is valid even if Aboriginal owners were not consulted and did not give consent.
- The NRWMA has sections which nullify State or Territory laws that protect the archaeological or heritage values of land or objects, including those which relate to Indigenous traditions.
- The NRWMA curtails the application of Commonwealth laws including the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and the *Native Title Act 1993* in the important site-selection stage.
- The *Native Title Act 1993* is expressly overridden in relation to land acquisition for a radioactive waste facility.

The Senate Committee should ask the government / department to justify the above-mentioned legal exemptions and overrides.

The government plans to ask the AEC to assess public opinion around the nominated sites in August / September 2018 but there is no clarity about how the views of Aboriginal Traditional Owners will be taken into account.

The government appears to have made little or no effort to determine the views of Traditional Owners with an interest in the Kimba sites. From the available evidence there is little support and whatever support exists falls a long way short of 'broad' support (see for example submission #56 to this Senate Inquiry from the Barngala Determination Aboriginal Corporation).

Minister Canavan was recently quoted in the media stating that "many" Adnyamathanha Traditional Owners support the location of a radioactive waste facility at the Wallerberdina site. There is no evidence for such claims, nor any likelihood that the level of support that exists among Adnyamathanha Traditional Owners would come close to reaching the threshold of 'broad' support. Moreover the representative body, the Adnyamathanha Traditional Land Association, has made its opposition clear (see submission #42).

The Wallerberdina (Flinders Ranges) site was nominated under a process which has since been significantly amended by the federal government. For that reason, the Senate Committee should recommend that the Wallerberdina nomination be quashed.

Former Minister Ian Macfarlane described the Muckaty process as a 'disaster' and the current process is equally disrespectful. Moreover the government's process is a clear breach of the UN Declaration on the Rights of Indigenous Peoples (Article 29): "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."

## **5. Whether and/or how the Government's 'community benefit program' payments affect broad community and Indigenous community sentiment.**

It seems clear that the government is trying to win community support with its \$2 million small grants programs and the promise of a \$10 million grant for a selected site. It is highly problematic for the government to be preying on the vulnerability of small, struggling communities in this manner.

Moreover, the \$10 million grant for a facility that would operate for approx. 300 years amounts to \$33,000 per year, i.e. next to nothing. And the claim that the facility will sustain 15 permanent jobs is implausible.

## **6. Whether wider (Eyre Peninsular or state-wide) community views should be taken into consideration and, if so, how this is occurring or should be occurring.**

There are numerous problems with the government's current process of assessing community views within approx. 50 kms of the proposed site (in the Phase 1 process, the government surveyed opinions within a 40–75 km radius around the proposed sites<sup>5</sup>).

Firstly, the government has no clear markers for assessing community views within those boundaries. Minister Matt Canavan suggested 65% as the marker for 'broad community support' but then continued with the Kimba sites even after an AEC survey determined that support fell considerably short of that level at 56%.

The declaration of a site for the radioactive waste facility gives the Minister the right to acquire adjacent or related land required to access the declared site and may therefore affect the rights of other community members. People in that situation will have no right to reject land acquisition, nor will they be entitled to compensation.

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<sup>5</sup> Minister for Resources, Energy and Northern Australia, 17 Feb 2016, Senator Matt Canavan's answer to Senate question 2913 from Senator Scott Ludlam.

Secondly, 200+ years of displacement of Aboriginal people needs to be taken into account. As discussed above, the level of support for the proposed facility among Traditional Owners appears to be minimal and in no way meets the government's own benchmark of 'broad' support. The fact that the government is proceeding nonetheless is deeply disrespectful.

Thirdly, communities living along transport corridors will face risks of transport accidents yet there has been zero consultation with these communities. Countless transport accidents involving radioactive materials have been documented<sup>6</sup> yet the federal government simply ignores the issue. Concern and opposition along transport corridors has been significant – for example 16 of the 18 councils between Lucas Heights and Woomera expressed opposition when the Howard government sought to establish a waste facility near Woomera from 1998–2004.

Fourthly, it is unacceptable for the federal government to ignore state/territory legislation banning the establishment of radioactive waste dumps. In the case of South Australia, the relevant legislation is the Nuclear Waste Storage (Prohibition) Act 2000 which bans the import, transport, storage and disposal of nuclear wastes.

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:<sup>7</sup>

*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 undermine this claim and open the process to challenge.

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<sup>6</sup> 'Nuclear Transport Risks', excerpt from Friends of the Earth et al., 2016, Submission to the SA Joint Select Committee on the Findings of the Nuclear Fuel Cycle Royal Commission, <https://nuclear.foe.org.au/wp-content/uploads/SA-Joint-Select-Committee-FoE-ACF-CCSA-final-transport-only.pdf>

<sup>7</sup> Minister for Resources and Northern Australia, Senate, Question Number: 433. Date Asked: 29 March 2017

## 7. Any Other Related Matters – Alleged Need for a Dump and Store.

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. Those issues are addressed in detail in a November 2014 civil society briefing paper.<sup>8</sup>

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.
2. Differentiating waste arising from the operations of the Australian Nuclear Science and Technology Organisation (ANSTO) from non-ANSTO waste.
3. Differentiating low level radioactive wastes (LLW) from long-lived intermediate-level waste (LLILW).

Those three issues are further discussed here.

**1. Differentiating waste that needs to be moved vs. waste that does not need to be moved.** This would be consistent with the net-benefit clause (subsection 32(3)) in the Australian Radiation Protection and Nuclear Safety Act<sup>9</sup> and the net-benefit clause in the NH&MRC Code of Practice for the Near-Surface Disposal of Radioactive Waste in Australia<sup>10</sup>. This in turn would require a more detailed inventory than has been compiled to date and consideration of issues (detailed in the November 2014 civil society briefing paper<sup>11</sup>) 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.

To give one specific example of highly questionable government information / misinformation, the Department of Industry, Innovation and Science's public newsletter (Issue No. 8, April 2017) stated 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 but no credible response has been forthcoming. Indeed a departmental officer attempted to justify the claim by nominating

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<sup>8</sup> 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', <https://nuclear.foe.org.au/wp-content/uploads/Responsible-Radioactive-Waste-Management-The-need-for-an-Inquiry-Final.pdf>

<sup>9</sup> [www.comlaw.gov.au/Series/F1999B00034](http://www.comlaw.gov.au/Series/F1999B00034)

<sup>10</sup> [www.arpansa.gov.au/pubs/rhs/rhs35.pdf](http://www.arpansa.gov.au/pubs/rhs/rhs35.pdf)

<sup>11</sup> 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', <https://nuclear.foe.org.au/wp-content/uploads/Responsible-Radioactive-Waste-Management-The-need-for-an-Inquiry-Final.pdf>



just two sites which are allegedly nearing capacity. No correction or apology was provided in subsequent newsletters.

That is just one example of government misinformation. If the Senate Committee feels it would assist its deliberations, Friends of the Earth can provide dozens of examples.

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".<sup>12</sup>

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.

**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.<sup>13</sup> 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.

Measured by radioactivity, a large majority of low-level waste (LLW) is stored at ANSTO's Lucas Heights site; measured by volume, ANSTO manages about half the total volume. It is by no means clear that a remote repository is preferable to ongoing storage at Lucas Heights. 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 that proposed for a remote repository.

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

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<sup>12</sup> [www.sbs.com.au/news/article/2014/09/30/government-searching-nuclear-waste-site-time-runs-out](http://www.sbs.com.au/news/article/2014/09/30/government-searching-nuclear-waste-site-time-runs-out)

<sup>13</sup> 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', <https://nuclear.foe.org.au/wp-content/uploads/Responsible-Radioactive-Waste-Management-The-need-for-an-Inquiry-Final.pdf>

difficulty with that. I think we've been doing it for many years. We have the capability and technology to do so."<sup>14</sup>

- 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."<sup>15</sup>
- Dr Clarence Hardy, Australian Nuclear Association: "It would be entirely feasible to keep storing it [radioactive waste] at Lucas Heights ..."<sup>16</sup>
- 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."<sup>17</sup>
- 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."<sup>18</sup>

**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 former Howard Government abandoned plans for co-location in 2001 and de-coupling the management approach is by no means a radical proposal. If a case for centralised interim storage of LLILW is established, secure Commonwealth sites should be considered.

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.

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<sup>14</sup> ARPANSA forum, Adelaide, 26 February 2004,  
<http://web.archive.org/web/20040610143043/http://www.arpansa.gov.au/reposit/nrwr.htm#forum>

<sup>15</sup> September 2008, [www.abc.net.au/news/2008-09-22/new-nuclear-waste-site-for-sydney/517372](http://www.abc.net.au/news/2008-09-22/new-nuclear-waste-site-for-sydney/517372)

<sup>16</sup> ARPANSA forum, Adelaide, 26 February 2004,  
<http://web.archive.org/web/20040610143043/http://www.arpansa.gov.au/reposit/nrwr.htm#forum>

<sup>17</sup> April 2002, Decision by the CEO of ARPANSA on Application to construct the Replacement Research Reactor at Lucas Heights. Reasons for Decision", p.30.

<sup>18</sup> Application to ARPANSA, 2003, Vol.iii Ch.9 Waste – Transfer and Documentation p.5.

## 8. Any Other Related Matters – Long-lived Intermediate-level Waste

The government has no plans for LLILW disposal.

Despite arguing that Australia's long-lived intermediate-level waste (LLILW) is destined for deep underground disposal, no progress is being made towards the establishment of such a facility. Preliminary work was carried out by the National Store Project in the early 2000s, but that preliminary work was terminated in 2004 in favour of a short-lived plan to establish a waste repository on a Pacific island (a largely forgotten episode in this saga).

Many stakeholders have sought clarification on the status of final disposal plans for ILW 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?*

Those 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".<sup>19</sup>

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

Mr Wilson told the Economics Legislation Committee on 1 June 2017 that "by the time we come to them [affected communities in Kimba and/or the Flinders Ranges] 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 ..."<sup>20</sup>

Despite those claims, there will be no clarity on LLILW disposal methods for years or decades to come.

The federal government and the Department of Industry, Innovation and Science state that the intention is to store LLILW above-ground in the Kimba region or the Flinders Ranges for

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<sup>19</sup> 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](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)

<sup>20</sup> 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](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)

"several decades"<sup>21</sup> 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".<sup>22</sup>
- 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".<sup>23</sup>
- The ARPANSA CEO said in May 2015 that: "This plan will have provision for ILW storage above ground for approximately 100 years."<sup>24</sup>

Clearly there is a major disconnect between what the federal government and the Department of Industry, Innovation and Science are telling affected communities in Kimba and the Flinders Ranges, and the information available in ARPANSA documentation.

### **Disposal options**

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."<sup>25</sup>

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. In May *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 doesn't intend to continue supporting the Deep Borehole Field Test project, which was

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<sup>21</sup> 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](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)

<sup>22</sup> ARPANSA, May 2017, 'Information for Stakeholders', [www.arpansa.gov.au/pubs/regulatory/nrwmf/Rad-waste-info-for-stakeholders.pdf](http://www.arpansa.gov.au/pubs/regulatory/nrwmf/Rad-waste-info-for-stakeholders.pdf)

<sup>23</sup> 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](http://www.arpansa.gov.au/pubs/regulatory/guides/REG-LA-SUP-240A.pdf)

<sup>24</sup> ARPANSA CEO, 8 May 2015, 'Statement of Reasons', [www.arpansa.gov.au/pubs/regulatory/ansto/SOR\\_operationIWS.pdf](http://www.arpansa.gov.au/pubs/regulatory/ansto/SOR_operationIWS.pdf)

<sup>25</sup> 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](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)

meant to assess whether nuclear waste could be stored in approximately three-mile-deep holes."<sup>26</sup>

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 military-origin long-lived waste – was closed for three years after a chemical explosion in February 2014.

### **The 'Australian Radioactive Waste Management Framework'**

On 10 April 2018 the government announced the 'Australian Radioactive Waste Management Framework' which will "guide the principles, policies and institutional arrangements of radioactive waste management in Australia."<sup>27</sup> Regarding LLILW, the government's media release could hardly be more vague, stating that "the framework will also guide the development of a different, later process to establish a separate and permanent facility for intermediate level waste at another location" and one "of its key activities will be to develop the intermediate level waste disposal pathway."<sup>28</sup>

The Senate Committee should seek clarity from the government regarding plans for LLILW disposal and the lack of clarity in the 'Australian Radioactive Waste Management Framework' document.<sup>29</sup> The framework document flags the possibility of shallow disposal of intermediate-level waste. Clarity is needed as to whether the government is considering shallow disposal of *long-lived* intermediate-level waste or if it is merely seeking to pursue shallow disposal of *short-lived* intermediate-level waste. Long-standing convention, accepted by successive governments, is that *long-lived* intermediate-level waste should be disposed of by deep burial. If the government is seeking to overturn that accepted convention, it ought to say so clearly and explain the reasons.

As things stand, we assume that the government still accepts the long-standing convention, accepted by successive governments, that *long-lived* intermediate-level waste should be disposed of by deep burial.

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<sup>26</sup> 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](http://www.nationalobserver.com/2017/05/24/news/trump-administration-dropping-nuclear-waste-burial-test)

<sup>27</sup> 'Media Release - New framework, function to guide management of radioactive waste and a disposal pathway for intermediate waste', 10 April 2018, [www.radioactivewaste.gov.au/news/media-release-new-framework-function-guide-management-radioactive-waste-and-disposal-pathway](http://www.radioactivewaste.gov.au/news/media-release-new-framework-function-guide-management-radioactive-waste-and-disposal-pathway)

<sup>28</sup> 'Media Release - New framework, function to guide management of radioactive waste and a disposal pathway for intermediate waste', 10 April 2018, [www.radioactivewaste.gov.au/news/media-release-new-framework-function-guide-management-radioactive-waste-and-disposal-pathway](http://www.radioactivewaste.gov.au/news/media-release-new-framework-function-guide-management-radioactive-waste-and-disposal-pathway)

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[www.radioactivewaste.gov.au/sites/prod.radioactivewaste/files/files/Australian%20Radioactive%20Waste%20Management%20Framework.pdf](http://www.radioactivewaste.gov.au/sites/prod.radioactivewaste/files/files/Australian%20Radioactive%20Waste%20Management%20Framework.pdf)

## 9. Any Other Related Matters – Need for an Independent Commission of Inquiry

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. Those issues are addressed in detail in a November 2014 civil society briefing paper.<sup>30</sup>

Issues for an independent Commission of Inquiry to consider include:

- An accurate, up-to-date inventory (including accurate data as to which current storage sites continue to accumulate sites and which are legacy sites)
- The adequacy of existing stores.
- The adequacy of institutional arrangements to oversee existing stores (keeping in mind that many will continue storing waste even if an off-site disposal option is available, as more waste is generated).
- Whether (overseas) reprocessing of spent nuclear fuel is essential; or whether alternative methods of spent fuel conditioning might be available and preferable; or whether storage might be preferable pending decisions at a later date regarding reprocessing / conditioning / disposal.
- How LLILW should be managed (e.g. on-site storage, deep geological disposal) in the short to medium term and the long term.
- The terms of contracts with France concerning the return of reprocessing wastes including options for extending storage agreements until a suitable storage/disposal site is constructed in Australia, similar to the terms of the UK contract.
- The adequacy of facilities at Lucas Heights for storage of spent fuel, reprocessing waste, and other LLILW.

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<sup>30</sup> 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', <https://nuclear.foe.org.au/wp-content/uploads/Responsible-Radioactive-Waste-Management-The-need-for-an-Inquiry-Final.pdf>