

To The Economic References Senate Committee Inquiry

The appropriateness and thoroughness of the site selection process for a national radioactive waste management facility at Kimba and Hawker in South Australia, noting the Government has stated that it will not impose such a facility on an unwilling community, with particular reference(s)...

Submission by Michele Madigan

INTRODUCTION

Thank you for this welcome opportunity to respond to this serious matter. I submit that the present method/process of selection for the site for Australia's long term intermediate radioactive waste and to a lesser extent for the nation's low level radioactive waste is not only **inappropriate** but has **grave implications for present and future generations:**

- *of local communities

- *for all South Australians

- *and indeed all Australians – in particular those national communities along any proposed transport route.

I note, as does the Senate Committee, that the Federal Government has stated that it will not impose such a facility on an unwilling community. This condition of willingness is indeed world's best practice. Whether or not its present process and reported results accurately reflects the reality of such unwillingness in the South Australian proposed sites is discussed below.

Overseas experience in countries such as Finland (presently building their underground facility available in 2024 after lengthy and transparent community consultation) and in certain locations in the USA (eg Yucca Mountain, Nevada- facility halted due to community concerns; other locations going ahead with transparent community consent *cf* documentary film *Containment* by Harvard Professors Gallison and Moss) bears witness to the long-term effectiveness of this approach to this most difficult world problem.

This approach is required for both in harmonious local community relations, within the particular State and that between State and Federal entities. Furthermore, '*Appropriateness and thoroughness*' obviates the risk to any clear procedural and legal challenge.

In this instance it is pertinent to note in particular that existing South Australian legislation, the Nuclear Waste Facility (Prohibition) Act 2000, makes the federal plan unlawful in South Australia. While the Federal Government could override any state legislation of this nature, doing so would be inconsistent with leading practice for facility siting: obviously imposition against an unwilling broad community consent.

On site local proponents, particularly in the Kimba region seem to quote that the Federal site will only house short -term (300 years!) low level nuclear waste. The newly elected Premier of SA has been heard to quote the same misinformation. Despite the government information pack mentioning the intermediate waste, unfortunately the conclusion is clear: **the present Australian Federal Government project on the ground, lacks both these cited elements of *appropriateness* and *thoroughness*.**

Thanks to this Senate Inquiry the multiple weaknesses of **this current process** of the Federal Government of simply calling for private applications for siting Australia's nuclear waste, including long lived intermediate level waste, can be exposed.

Moreover an alternative effective independent solution can be proposed (see final section below).

RESPONSES TO PARTICULAR POINTS AS IDENTIFIED BY THE SENATE COMMITTEE

a) the financial compensation offered to applicants for the acquisition of land under the Nominations of Land Guidelines;

- If the Wallerberdina site at Barndioota in the Flinders Ranges is chosen, this compensation includes an absentee land/lease holder; one or two persons benefit financially at the certain risk of others' loss of livelihood in the tourism industry, in the neighbouring pastoral (livestock) properties in the Aboriginal heritage sites (see below) and the environmental safety of the region with its history of severe flooding and serious and frequent seismic activity. (see Hydrogeological assessment of Hookina Spring (Punka Pudahna) Flinders Ranges 2015)

The iconic Flinders Ranges site with its enormous cultural, scientific and economic values would be devastated. Tourism in the Flinders Ranges currently employs 1400 people

*If one of the two Kimba sites is chosen, (the one which locals seem to think is more likely of the two) this means that the homestead of the nearest neighbour – an opponent who fears for his international markets– is closer to the offered site than the homestead of the proponent who will be given the financial compensation.

Kimba region farmers are recognised as some of the best dry farmers in the world but the competition between grain farmers for international markets is so intense that the warning from the relevant professional marketing company is clear: proximity to a nuclear waste dump will have predictably disastrous negative effects. Proximity to an intermediate (10,000 years) and low level (300 years) nuclear dump not only risks, but makes certain, the actual loss of their international grain market.

And that moreover, the risk of impacting on all our SA primary exports, especially others from the whole Eyre Peninsula region. The irony is well noted by the Kimba farmers who oppose the federal proposal – 'It's the farmers who've kept the town going.'

Furthermore, the immediate financial benefit to this individual/family is at the cost of likely long-term seepage into groundwaters; by the present insufficiently scientific proposal of above ground storage with no clear and budgeted plan to meet the extraordinary cost of world's best practice underground burial for intermediate radioactive waste.

The proselytising nature of the Department employees, including those on site is such that many of those affected and including those set to benefit have apparently not been informed accurately of the true nature of the level of radioactive waste – that it is the highest level available in

Australia – long lived intermediate nuclear waste which remains radioactive for an unimaginable 10,000 years.

b) 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'*

In this submission to the Senate Inquiry I note that it is ingenuous of the Federal Government and its Department - or of the local proponents- to claim that only the two broad areas, presently under Federal site selection process will be affected: the Kimba area and Flinders Ranges (and perhaps the latter shrunken further by Federal reduction to a tiny area of the Hawker region).

In reality all of the State of South Australia will be affected in fact and by reputation with likely and perceived risk to:

- The health of the present and future generations of its citizens, lands and groundwaters
- Economically - on its tourism and international grain markets.
- The safety of other communities nationally along the transport corridors.

Transport risks to yet unnamed communities need to be included in any site selection process and importantly in alerting likely communities along the route. In contrast to the 1998-2004 previous Federal attempt to locate the permanent facility in northern South Australia, the likely transport affected communities in the Blue Mountains region, in the regional towns and cities of Griffith, Dumbo, Broken Hill and so on were united in the national LGA, Local Government Association motion (12/11/2003) that transporting such material hundreds of kilometres from where the highest level national waste – long lived intermediate waste - is stored in Lucas Heights, southern Sydney region **had severe implications for all communities**. The transport risk remains for the current proposal on a yet to be chosen route which will include SA communities.

In the previous eight year campaign for the Mukaty Northern Territory proposed site, Essential Services made clear that transport accidents would be beyond the capability of services and put members as well as members of the public at unacceptable risks. There is no safe level of exposure to ionising radiation. As European nuclear transport history shows, it is ingenuous of proponents to declare there will be no such accidents. Even locally (8th December 1994) one of the drums in a truck transporting low level nuclear waste from NSW was discovered to be leaking contaminated material two kms north of Port Augusta on to the Stuart Highway. The material was originally from Fisherman's Bend near Melbourne bound for Woomera. Local Aboriginal Elders were concerned that the contaminated material had already actually spilt from the Port Augusta Bridge into the sea before it was detected.

ii) *how 'broad community support' has been or will be determined for each process advancement stage;*

As I have pointed out, above and below, during the current proposal period, the disputably named 'broad community support' has been devolved into narrow geographical regions. (And in the Flinders Ranges region, been potentially designated even smaller.)

This is a national problem which has been focussed, in this current proposal, on a state seen as politically vulnerable. It is extraordinary that an outstanding national tourist area and an international grain farming area have been judged from an ongoing Federal perspective as suitable as sites for a long-term nuclear dump.

As outlined above, the initial process eschewed genuine scientific selection but was primarily and in the first instance based on an individual offering a site for consideration and acceptance to the

Federal Department of Resources. No community support or even notification was required to be acceptable on the long list, or the short list.

\$2 million was offered for no strings attached community projects with on site Federal Departmental officers to 'inform' residents initially in the original proposed preferred site in the Flinders Ranges. Later the procedure was repeated in newly offered proponents in the two sites in the Kimba area.

\$10 million and a tiny 15 permanent jobs are offered for final site selection as the payoff. A federal dumpsite proposal has brought deep divisions and certain risk to their international markets in the Kimba region. Many residents both for and against the proposal describe Kimba as a formerly close-knit community now torn apart. Not relying on second hand accounts, I have heard some of these assertions and noted the extreme concern myself.

The close voting statistics for and against belie Minister Canavan's assertion that Kimba is clearly in favour. I draw the Senate Inquiry's attention to this fact in particular.

The family and community divisions (personally heard myself many times) continue in the longer term proposed project for the Flinders Ranges area with particular fears for the national and international tourist trade, Aboriginal heritage and story lines, seismic activity and flooding fears based on well documented facts.

All in the balance against the proposed short term funds for the region and in particular for the site lease/landholder.

c) 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 Flinders Ranges region:

The Adnyamathanha Community has been to the forefront of opposition to the proposed Flinders Ranges site. Extraordinarily, the local proponent who offered his leasehold for site selection - with absolutely no consultation or even reference to his neighbours, is immediately adjacent to the Yappala Aboriginal community which has the distinction of being the first IPA, Indigenous Protected Area in Australia. The Indigenous Protected Areas programme is administered by the Department of the Prime Minister and Cabinet on behalf of the Department of the Environment.

It is quite astounding that the chosen Flinders Ranges site could be accepted and continue to be remain as a potential site for the past almost two years when it is replete with such an extraordinary number of ancient Aboriginal artefacts and the proven recorded story lines of thousands of years of Aboriginal heritage.

The Kimba, Eyre Peninsula region.

In contrast, in the proposed Kimba area sites, colonisation has traditionally forced Traditional Owners from the area

However that does not mean that the Kimba area is without Aboriginal heritage value.

There are Traditional Owners still living – elsewhere with anxious responsibility for country- land, groundwaters and cultural heritage.

In addition, Traditional Owners from neighbouring areas - in this instance in particular, women, are concerned that the story lines which traverse the country will not be desecrated by the

imposition of this proposed national long lived intermediate radioactive and low level radioactive waste repository.

d) whether and/or how the Government's 'community benefit program' payments affect broad community and Indigenous community sentiment;

As the Federal Government and Department has discovered from its previous failed campaign in South Australia, it is necessary to offer financial incentives to the affected community for the obvious – if severely understated – negative impact that the establishment of such a facility will have on health, (including mental health) of community members, country and ground waters and economic impacts on tourism and grain markets.

Obviously it is true- that Government's 'community benefit program' payments affects broad community and Indigenous community sentiment. Sadly, with the government's 'no-strings-attached' actual distribution and implementations of \$2 million for community projects, the tearing apart of families/community members has intensified.

For struggling regional areas and individuals, immediate funds can blind various members to the reality of longer term negative effects – especially as in this case when these effects are down played by the proponent.

The process of nomination by individuals (and acceptance by the Department) in both Flinders Ranges and Kimba sites has led to very serious community and family disruption and genuine angst in the general communities of Kimba and districts, Hawker, Quorn and districts. Surely there is a better way.

RE *Indigenous community sentiment*; A word of warning: it is a myth to have a romanticised view that all Aboriginal community members will be able to hold out for heritage and the health of country and future generations when immediate financial incentives are offered. This in particular is a fact to be aware of when proponents are eager to cite individual Aboriginal community members who stand with them against the general Aboriginal community. In notable instances, as well as community ties, immediate family ties have been severely disrupted by this current process of the Federal Ministry and Department for Resources.

e) 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; and

This is a serious national issue. This plan is a federal government initiative to start a national waste facility – it requires national attention.

The national radioactive waste facility is in two parts (i) a dump for LLW – placed there and never recovered or removed (most of this material will decay to background equivalent in 300 years) and (ii) a store for ILW to be kept above ground prior to being removed at a undefined future point by an undefined process to an unchosen site for promised deep burial (this material needs to be isolated from the wider environment for 10, 000 – 10K – years).

Effectively it is about relocating Australia's worst radioactive waste from above ground interim storage at a purpose built and heavily secured and resourced facility in Sydney to above ground interim storage at a far less resourced facility in regional SA. There is no compelling public health or radiation management rationale for this approach.

It is definitely not something that should be foisted on a community area/state/through transport route communities at the behest of a local land/leaseholder

The Senate Inquiry will hopefully bring to the Federal Government and the nation's attention that this storage of national radioactive waste, including the long term intermediate waste from the national nuclear reactor, is a serious and long term – an inconceivable 10, 000 years.

Summary: The present flawed and largely unscientific process with insufficient community support presents huge risks to South Australia's agriculture, water tables, international grain markets, long-term economy, Aboriginal heritage and health of its present and future generations. The danger of transporting toxic materials through South Australia and above all, the lack of a present long term scientifically proven solution for the reality of 10,000 years of storage of intermediate level waste and the division it causes in our communities are factors presenting risks too great for this project to proceed.

Any other related matters.

1 .Previous Federal Government Assurances

At the announced conclusion (13th July 2004) of the previous unsuccessful attempt to put a Federal dump/repository in SA, South Australians were assured by Prime Minister John Howard that 'a Federal nuclear dump of any kind would not go ahead in South Australia.' In fact Senator Nick Minchin assured the State that this would **never** happen in South Australia. (*July 15th, 2004- Adelaide Advertiser headlines and cover story*)

2.Questionable scientific data and process

At the beginning of this current process, once the national applications had been received apparently the Department concerned then began a shortlisted site selection from various lease/landholders over the nation who had offered their land.

When challenged by the weaknesses of this method as regards the safety and scientific suitability of any site, the Department gave the assurance that its original preferred six short listed sites were the result of a 'desktop study' to assure suitability.

With three out of six of the proposed 24 sites then being placed on the shortlist being in South Australia, it was difficult not to believe that the decision was a political one with South Australia seen as a less politically difficult state than two of the other sites of the eastern states. Moreover with exactly one half of the shortlisted states selected being in SA it seemed inevitable that in this current Federal Government as happened the final site chosen would be in SA.

Furthermore with the initial selection of the Flinders Ranges site as the preferred option then came assurances that **only now would serious scientific and community support be investigated.** Surely this was a clear admission that the previous desktop investigation was of little value. As flawed as the previous 1998- 2004 first Federal Investigation and initial selection of sites had been, there was more scientific investigation and publication of data available to show that some preliminary scientific and more relevant investigation occurred **before** the announcement of the short list.

3. Fortunately there is an Interim Safe and Secure Solution – storage at Lucas Heights

- In 2015 ANSTO constructed and commissioned a new purpose built on site store dedicated to housing reprocessed spent nuclear fuel waste which returned from France in late 2015.

This Interim Waste Store has a conservative design life of forty years, its license is not time limited and it has (if required) regulatory approval to store these reprocessed wastes 'until the availability of a final disposal option'.

- Storage at ANSTO has been previously identified as a credible and feasible option by ANSTO, nuclear industry lobby group the Australian Nuclear Association and, most importantly, the federal nuclear regulator, the Australian Radiation and Nuclear Safety Agency (ARPANSA).
- ANSTO is already both the continuing producer of and home to virtually all of Australia's higher level radioactive waste
- ANSTO has certainty of tenure, a secure perimeter and is monitored 24/7 by Australian federal police
- Storing the waste at ANSTO means the waste will be actively managed as operations at the site are licensed for a further three decades. It also keeps waste management on the radar of the facility/people with the highest level of nuclear expertise and radiation response capacity in Australia

4. Strategy for Achieving a Final Solution to Australia's Intermediate Level Radioactive Waste and Low Level Radioactive Waste

The most serious matters for the Senate Inquiry to consider is no doubt the whole process of site selection both in the present process and importantly, **to nominate a far more satisfactory solution:**

The long lived radioactive waste needs to remain where it is presently safely stored **until an independent and seriously scientifically based long term solution can be found by an independent and knowledgeable national body of experts, unimpeded by short term political goals.**

Thank you to the Senate Inquiry Committee for accepting and considering my submission. In appreciation of your work in ensuring the need for an open process to permanently and safely deal with the reality of our national intermediate and low level radioactive waste - based on credible evidence and genuine community consent.

Thank you for any response to my submission.

Michele Madigan

29th March 2018

Committee Secretariat contact:

Senate Standing Committees on Economics