

12 December 2016

To: Samir Sarkar
Director, Regulatory Assurance
ARPANSA

Public submission to the draft ARPANSA *Information for Stakeholders & associated Regulatory Guide to Licensing a Radioactive Waste Storage or Disposal Facility*

Dear Director

Please consider this initial public submission to the ARPANSA “*Consultation Draft – Radioactive Waste Storage and Disposal Facilities, Information for Stakeholders*”, and associated Regulatory Guide to Licensing a Radioactive Waste Storage or Disposal Facility, on revision requirements to transparently scope the proposed *National Radioactive Waste Management Facility (NRWMF)*.

The *Information for Stakeholders* is insufficient for the purpose of informing stakeholders on the health and safety of people and the environment in ARPANSA’s roles and functions regarding the proposed NRWMF and Commonwealth reactor wastes and associated waste transport issues.

Fundamental issues of transparency on relevant information for informed decision making and on non-imposition of nuclear waste facilities should be addressed in the next edition of the documents.

The proposed above ground Store for irradiated nuclear fuel waste in the Flinders Ranges is clearly intended to operate for up to 100 years – it is ARPANSA’s responsibility to explain that ‘safety case’.

A public interest campaign, in line with the *Nuclear Waste Storage (Prohibition) Act 2000* passed by a Liberal SA government and expanded in 2002-03 by a Labor government), protected SA rights and interests from prior Federal attempts to impose national nuclear waste facilities over 1998-2004.

The Federal government’s NRWMF program is to try to again impose an above ground 100 year nuclear fuel waste Store onto South Australia and to target our iconic Flinders Ranges.

In direct contravention of legal prohibitions in SA law, by overriding a range of key protections in State & Federal law, and against express wishes of Adnyamathanha traditional owner community.

This is a serious and divisive threat to our democratic values, and to the human rights and cultural and heritage rights and interests of Indigenous Australians, and presents a significant public interest concern with potential to significantly detract from public confidence in ARPANSA.

Please feel free to contact regarding any aspect of this public submission.

Yours sincerely

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Independent Environment Campaigner

(Contact details and address provided by e-mail)

Summary

Revised ARPANSA “Information for Stakeholders” should address the following:

The nuclear fuel waste Store in the Flinders Ranges is intended to operate for approx. 100 years.

The ARPANSA “Information for Stakeholders” fails to be transparent and is not fit for purpose.

ARPANSA must inform the public on the proposed licence period for this nuclear fuel waste Store.

ARPANSA should also publicly acknowledge the Contingency that the proposed nuclear fuel waste Store may be at a different site to the proposed near surface Repository in the Flinders Ranges.

The proposed above ground Store in our iconic Flinders Ranges is unnecessary as the ANSTO’s existing Interim Waste Store (IWS) at the Lucas Heights Technology Centre can manage reprocessed nuclear fuel waste on contract from France and from the United Kingdom over the long term.

The ANSTO application for the Interim Waste Store was conservatively predicated on a 40 year operating life for the IWS, and ANSTO has a contingency to “*extend it for a defined period of time*”.

ANSTO also has a contingency option for the “*Retention of the returned residues at ANSTO until the availability of a final disposal option*” – which does not involve a Store in the Flinders Ranges.

The Lucas Heights Technology Centre is by far the best placed Institution and facility to responsibly manage Australia’s existing nuclear fuel waste and proposed waste accruals from the Opal reactor.

The *Interim Waste Store* (IWS) at the Lucas Heights Technology Centre can conservatively function throughout the proposed operating period of the Opal reactor without a requirement for an alternative above ground nuclear fuel waste Store at a NRWMF in the Flinders Ranges or elsewhere.

It is an inexplicable omission or an unacceptably act of denial for ARPANSA to fail to even identify or to properly explain Australia’s existing nuclear fuel wastes and proposed further decades of Opal reactor nuclear fuel waste production in the “*Information for Stakeholders*”.

Australia’s nuclear fuel wastes are by far the highest activity and most concentrated and hazardous nuclear wastes under Australian management, and must be distinguished from other waste forms.

ARPANSA must specifically include, describe and explain the full lifetime Opal reactor nuclear fuel waste disposition plan, across potential reprocessing or direct long term storage and disposal.

Decades of further Opal reactor production of nuclear fuel waste is proposed by the Federal government to end up Stored above ground at the NRWMF site in our iconic Flinders Ranges.

The *Regulatory Guide for Licensing a Radioactive Waste Storage or Disposal Facility at Time Frames* (line 409 – 413) states that the cut off time frame in the assessment of safety by a proponent:

“...must not be less than 10,000 years for disposal of intermediate level waste.”

Why does “*Information for Stakeholders*” fail to cite or explain the gravity of minimum required 10,000 year safety *Time Frames* for required isolation of Opal reactor produced nuclear wastes?

Recent Nuclear Safety Committee advice to the CEO of ARPANSA (NSC, 04 Nov 2016) on required stakeholder engagement – including along transport routes, on transparency and on resourcing is timely and raises a number of matters requiring an early resolution.

Engagement of stakeholders along transport routes has not been transparent to date with a failure by the Federal government to even acknowledge transport route options and consequent involved communities since the selection over 6 months ago of a single NRWMF site located in the Flinders Ranges for further Federal government assessment.

ARPANSA should *forthwith be transparent* on required stakeholder engagement along transport routes and include transport route options in revised “*Information for Stakeholders*”:

- As required for transport of Commonwealth reactor wastes (approx. 130 semi-trailer truck-loads) from Lucas Heights to a proposed NRWMF site in the Flinders Ranges;
- Acknowledging the critical issue of transport of nuclear fuel waste from Lucas Heights to the Flinders Ranges may likely require shipping from NSW to an as yet unnamed SA port;
- AND transport of proposed Opal reactor reprocessed nuclear fuel waste requires shipping from France to an as yet unnamed port in SA and onto the Flinders Ranges by road or by rail.

Nuclear fuel wastes affect the rights, interests and safety of all Australians and target Aboriginal communities in a serious threat to their country and culture. Their *No Dump* struggle is our cause.

South Australia is protected by the *Nuclear Waste Storage Facility (Prohibition) Act 2000* passed by our State Parliament to *prohibit* the import, transport, storage and disposal of nuclear fuel wastes under the political leadership of then Liberal Premier John Olsen.

However, the draconian *National Radioactive Waste Management Act 2012* is premised on the Resources Minister exercising a claimed over-ride of any Federal and State legislation and due process that would “*hinder*” imposition of siting, construction and operation of a 100 year nuclear fuel waste Storage facility and a near-surface Repository at the Minister’s nominated NRWMF site.

The Resources Minister claims an absolute discretion to declare a site for the NRWMF, to specifically override federal Environment Protection and Aboriginal Heritage legislation, and to declare that the State *Aboriginal Heritage Act* is to have “*no effect*” on the nuclear waste dump plan.

ARPANSA “*Information for Stakeholders*” must transparently acknowledge these legislative issues.

The draconian NRWM Act 2012 seriously compromises public trust in nuclear safety and nuclear waste management in Australia and this will adversely impact on public confidence in ARPANSA.

Questions: What integrity is left for the proposed ARPANS Act Site License process and decision?

How will the CEO of ARPANSA address the real adverse impacts of the Resources Minister’s discretion to override both federal and state Aboriginal Heritage legislation and a range of other protections and due process that our society and in particular Indigenous Australians rely on?

Given the proposed NRWMF siting decision is seriously compromised, ARPANSA should also explain if the ARPANS Act Site License and Construction Licence processes are to be merged into one?

The nuclear fuel waste Store in Flinders Ranges is to operate for approx. 100 years:

The ARPANSA “*Information for Stakeholders*” **fails to be transparent** on the fact that the proposed nuclear fuel waste Store in Flinders Ranges is intended to operate for approx. 100 years.

This is made clear in a number of ANSTO and ARPANSA documents on the ANSTO “*Interim Waste Storage Facility*” (IWS) at Lucas Heights - that is already storing reprocessed nuclear fuel waste.

For instance, the ARPANSA “*Regulatory Assessment Report – Operating*” (May 2015, p.42) states:

“Noting that the Government is currently inviting nominations of sites for the NRWMF, possibly involving co-location of a near surface disposal facility for Low Level Waste (LLW) and an above ground store for Intermediate Level Waste (ILW) it is feasible that the NRWMF will cater for the long term above ground storage (approximately 100 years) of Intermediate Level Waste including the waste reprocessed in France and the United Kingdom. ...

ANSTO refers to the Government’s planning for siting and construction of the NRWMF which will be a near surface disposal repository for low level waste (LLW), co-located with an above ground store for ILW. This plan will have the provision for ILW storage above ground for approximately 100 years.”

This Statement was issued at the same time as the Federal government was announcing the Flinders Ranges site as the only proposed site undergoing further assessment for the NRWMF.

The ARPANSA “*CEO's Statement of Reasons for the IWS operating licence*” (May 2015), at 3.Reasons for my Decision (a summary of the CEO’s considerations of the evidence before him) accepts ANSTO’s Contingency planning, including the NRWMF plan for an above ground store for ILW:

“This plan will have the provision for ILW storage above ground for approximately 100 years.” (p.14)

See: “**Interim Waste Store**” <http://www.arpansa.gov.au/regulation/ReturnofWaste/index.cfm>

And: “**CEO's Decision - ANSTO Interim Waste Store**”

<http://www.arpansa.gov.au/regulation/ReturnofWaste/iwsdecision.cfm>

The ARPANSA “*Information for Stakeholders*” claims in the *Introduction* to include the scope of the NRWMF, and must therefore provide relevant sufficient information to inform the public, but **fails to be fit for purpose** by excluding this critical and basic required public information.

ARPANSA must inform the public on the proposed licence period for this nuclear fuel waste Store:

The “*Information for Stakeholders*” should also state the proposed specific Licensing period for this Store, if that is proposed to open ended, or set at 100 years, or if a longer term is proposed.

In acknowledging that the proposed NRWMF is effectively for two facilities, which may involve separate licence applications and different licensing periods for the above ground Store and for the near surface Repository, ARPANSA should identify specific licensing periods for both facilities.

ARPANSA should also publicly acknowledge the Contingency that the proposed nuclear fuel waste Store may be at a different site to the proposed near surface Repository in the Flinders Ranges.

The proposed above ground Store in our iconic Flinders Ranges is unnecessary - existing Interim Waste Stores at Lucas Heights can manage nuclear fuel waste over the long term:

The existing IWS at the Lucas Heights Technology Centre was built to take the reprocessed nuclear fuel waste from both France and the UK and to be able to manage those wastes for at least 40 years.

The ARPANSA “Regulatory Assessment Report – Operating” (May 2015, p.43) for the IWS states:

“ANSTO’s application is predicated on a 40 year operating life for the IWS. ...

If the NRWMF were to be delayed beyond the 40 years, ANSTO would undertake actions to support an extension of the facility and container, or the safe transfer to another approved dual usage container. ...

Conclusion:

It appears there are some uncertainties regarding establishment of the NRWMF. ...

The ARPANSA assessor notes that though the (IWS) facility is for interim storage, the licence is not time-limited.”

The ARPANSA “CEO’s Statement of Reasons for the IWS operating licence” (May 2015) states:

“3.1.1 Purpose of the facility

The purpose of the IWS Facility is to store radioactive waste resulting from reprocessing of fuel that has been used in the now permanently shut down High Flux Australian Reactor (HIFAR). The application concerns spent fuel that was shipped to France (La Hague) and to the UK (Dounreay) under agreements with AREVA and UKAEA to reprocess the fuel and to return the radioactive waste resulting from the reprocessing...

General characteristics of the returned waste

... In addition, the waste to be returned from the UK may be required to be stored temporarily at the IWS Facility. This will only happen if the NRWMF is not available when the waste is returned. The return of the waste from the UK is planned to take place around the year 2020.

... The waste to be returned from France contains about five times more activity than the material to be returned from the UK. The dominating fraction (approaching 99.9%) of the activity of the waste returned from France will be contained in the TN81 cask. The total activity of beta emitters is in the order of 15 petabecquerel (PBq), dominated by strontium-90/yttrium-90 in secular equilibrium and caesium-137.

Radionuclide inventory

My request with regard to radionuclide inventory was phrased as follows:

... I consider it possible on the basis of the available information on the nature of the waste being returned from the UK that it can be stored at the IWS Facility. ...

I consider it appropriate that ANSTO dimension the IWS Facility and plan for its operations so that it may accommodate the waste returned from the UK.

Further, the ARPANSA “Regulatory Assessment Report – Operating” (May 2015) considered ANSTO Contingency Planning for the IWS to operate for longer than 40 years and to also potentially store reprocessed nuclear fuel waste at ANSTO “until the availability of a final disposal option”:

“3.2 ANSTO Contingency Plan

3.2.1 Lifetime and future use of the IWS Facility

... The conservative design life considered is 40 years. ...

3.2.2 Long term storage of waste and final disposal

ANSTO considers that in the unlikely event that the NRWMF is not built within 40 years, ANSTO would make a submission to ARPANSA to amend the licence to extend it for a defined period of time. ... ANSTO also considered reloading the waste into a new TN81 cask, and the reloading operation will be undertaken in a purpose-built facility subject to regulatory approval.

... ANSTO states that a final disposal strategy will be subject to Australian Government policy including monitoring of best practice disposal for such waste worldwide.

3.2.3 Contingency options

In the scenario of the unavailability of the NRWMF, ANSTO has identified the following options for contingency.

3.2.3.2 Retention of the returned residues at ANSTO until the availability of a final disposal option

... This plan will have the provision for ILW storage above ground for approximately 100 years. The Government will continue to explore final disposal options including geological disposal over this period taking into account international best practice of disposal of such waste.”

The ARPANSA “Information for Stakeholders” should acknowledge that the Interim Waste Store (IWS) at the Lucas Heights Technology Centre can:

- **conservatively function for an operating life of 40 years (plus a potential license period extension if and as required);**
- **can therefore function throughout the proposed operating period of the Opal reactor;**
- **and can function without any requirement for an above ground nuclear fuel waste Store at a proposed NRWMF in the Flinders ranges or elsewhere.**

The Lucas Heights Technology Centre is by far the best placed Institution and facility to responsibly manage Australia’s existing nuclear fuel waste and proposed waste accruals from the Opal reactor.

ARPANSA “Information for Stakeholders” inexplicably fails to identify nuclear fuel waste:

It is an inexplicable omission or an unacceptably act of denial for ARPANSA to fail to even identify or to properly explain Australia’s existing nuclear fuel wastes and proposed Opal reactor waste accruals in the “Information for Stakeholders” or in the section “What is radioactive waste?”.

Any public information must outline Australia’s nuclear fuel wastes, by far the highest activity and most concentrated and hazardous nuclear wastes under Australian management, explain storage and disposal requirements, and clearly distinguish these nuclear fuel wastes from other waste forms.

ARPANSA must specifically include, describe and explain the full lifetime Opal reactor nuclear fuel waste disposition plan - across potential overseas reprocessing & associated transport, and potential required direct long term storage and direct spent fuel disposal - if reprocessing is not available over the multi-decade period of proposed continued reactor operations at Lucas Heights.

Decades of further Opel reactor production of nuclear fuel waste is proposed by the Federal government to end up Stored above ground at the NRWMF site in our iconic Flinders Ranges.

The ARPANSA provided Key Definition “Storage” is misleading at best in claiming that storage is “designed to last for a period of tens of years” (line 65 – 69):

- Given the fact that the proposed above ground nuclear fuel waste Store at the proposed NRWMF in our iconic Flinders Ranges is intended to operate for approx. 100 years;
- And the fact that Australia has no policy or program or timeline for disposal of nuclear fuel wastes – thereby requiring *open ended* Storage...

The *Regulatory Guide for Licensing a Radioactive Waste Storage or Disposal Facility* at **Time Frames** (line 409 – 413) states that **the cut off time frame in the assessment of safety by a proponent:**

“...must not be less than 10,000 years for disposal of intermediate level waste.”

Why does “Information for Stakeholders” fail to cite or explain the gravity of minimum required 10,000 year safety Time Frames for required isolation of Opal reactor produced nuclear wastes?

Further, the Schema (line 94) fails to cite *Short Lived Intermediate Level wastes* (SLIL) - characterised by isotopes with a half-life of up to 30 years requiring management in the order of 300 years.

It is not informative and arguably not correct, as line 94 Information appears to do, to include controversial high activity SLIL wastes - hazardous to public health - among Low level waste (LLW).

These SLIL wastes were a predominant fraction of radioactivity in wastes proposed to be subject to near surface burial in the abandoned *National Repository* program (1992-2004) and represent a significant proportion of the activity of ANSTO’s (non fuel waste) reactor waste inventory.

“Information for Stakeholders” should provide an inventory of reactor wastes and identify the total activity values in nuclear fuel waste (existing & proposed) and compared to other reactor waste forms, across Long Lived Intermediate Level and SLIL and Low level reactor wastes.

For instance, the total activity of beta emitters in French reprocessed nuclear waste sent to Lucas Heights is cited in the CEO’s *Reasons for Decision* as in the order of 15 petabecquerels (PBq).

Nuclear Safety Committee advice to the CEO of ARPANSA on required stakeholder engagement – including along transport routes, on transparency and on resourcing:

Recent “*Advice to the CEO of ARPANSA*” from the Chair of Nuclear Safety Committee (NSC, 04 Nov 2016) is timely and raises a number of matters requiring early resolution, stating the Committee has:

“... identified several components of the ARPANSA Communication Strategy and Plan for the NRWMF that will require ongoing focussed resources for successful engagement. Such engagement is essential if ARPANSA is to be effective in developing and maintaining the confidence of stakeholders as a trusted regulator. The components identified by the Committee include but are not limited to:

- ***The ongoing requirement to clearly and effectively engage all stakeholders, including those along transport routes.** The purpose of this engagement is to communicate the role of ARPANSA as the independent regulator **and to be transparent in the reasoning for future decisions made regarding the NRWMF.** ... (bolding added)*

“... it is not clear that ARPANSA is adequately resourced to develop and maintain a capability so that ARPANSA is able to learn the lessons from Australian and overseas experience of the concerns stakeholders are likely to raise in connection with technological processes they are unfamiliar with. Experience from overseas and from other industries strongly suggests ARPANSA will need an ongoing capacity in this area. ...

Given the recognised examples where similar projects have failed both in Australia and internationally, the Committee requests further information from ARPANSA to confirm that sufficient resources are available within the organisation for continued and independent engagement with stakeholders at the frequency, locations, and in the form appropriate to specific issues throughout the duration of this nationally important and long term project.”

Engagement of stakeholders along transport routes has not been transparent to date with a failure by the Federal government to even acknowledge transport route options and consequent involved communities since the selection over 6 months ago of a single NRWMF site located in the Flinders Ranges for further Federal government assessment.

ARPANSA should forthwith be transparent on required stakeholder engagement along transport routes and include transport route options in revised “*Information for Stakeholders*”:

- As required for transport of Commonwealth reactor wastes (approx. 130 semi-trailer truck-loads) from Lucas Heights to a proposed NRWMF site in the Flinders Ranges;
- Acknowledging the critical issue of transport of nuclear fuel waste from Lucas Heights to the Flinders Ranges may likely require shipping from NSW to an as yet unnamed SA port;
- AND transport of proposed Opal reactor reprocessed nuclear fuel waste requires shipping from France to an as yet unnamed port in SA and onto the Flinders Ranges by road or by rail.

See: ***Nuclear Safety Committee Advice and Reports***

<http://www.arpansa.gov.au/AboutUs/Committees/nscrpts.cfm>

The NRWM Act 2012 imposes siting of a nuclear Store and claims to override Federal and State legislative protections, due process and community rights and interests:

Nuclear fuel wastes affect the rights, interests and safety of all Australians and target Aboriginal communities in a serious threat to their country and culture. **Their *No Dump struggle is our cause.***

The Federal government's proposed National nuclear waste dump target's the Aboriginal community in the Flinders Ranges in a serious threat to their human rights and cultural rights and interests.

South Australia is protected by the *Nuclear Waste Storage Facility (Prohibition) Act 2000.*

Our State Parliament passed Legislation in 2000 to prohibit the import, transport, storage and disposal of nuclear fuel wastes under the political leadership of then Liberal Premier John Olsen.

The *Objects of this important Act provide critical public interest tests for today's waste dumpers:*

"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."

In contrast, the draconian *National Radioactive Waste Management Act 2012* is premised on the Resources Minister exercising a claimed over-ride of any Federal and State legislation and due process that would "*hinder*" imposition of siting, construction and operation of a 100 year nuclear fuel waste Storage facility and a near-surface Repository at the Minister's nominated NRWMF site.

The Resources Minister claims an absolute discretion to declare a site for the NRWMF, to specifically override federal Environment Protection and Aboriginal Heritage legislation, and to declare that the State *Aboriginal Heritage Act* is to have "*no effect*" on the nuclear waste dump plan.

The NRWM Act 2012 section 12: *Application of State and Territory laws*

(1) *A law, or a provision of a law, of a State or Territory (whether written or unwritten), so far as it relates to:*

(a) the use or proposed use of land or premises; or

(b) the environmental consequences of the use of land or premises; or

(c) the archaeological or heritage values of land, premises or objects (including the significance of land, premises or objects in the traditions of Indigenous people); or

(d) controlled material, radioactive material or dangerous goods; or

(e) licensing (however described) in relation to:

(i) employment; or

(ii) carrying on a particular kind of business or undertaking; or

(iii) conducting a particular kind of operation or activity;

has no effect to the extent that it would, apart from this section, regulate, hinder or prevent the doing of a thing authorised by section 11.

(2) *The regulations may prescribe a law, or a provision of a law, of a State or Territory for the purposes of this subsection.*

section 13 Application of Commonwealth laws

(1) The following laws have no effect to the extent that they would, apart from this section, regulate, hinder or prevent the doing of a thing authorised by section 11;

(a) the Aboriginal and Torres Strait Islander Heritage Protection Act 1984;

(b) the Environment Protection and Biodiversity Conservation Act 1999.

(2) The regulations may prescribe another law, or a provision of another law, of the Commonwealth for the purposes of this subsection. (bolding added)

ARPANSA “*Information for Stakeholders*” must transparently acknowledge these legislative issues.

The draconian NRWM Act 2012 seriously compromises public trust in nuclear safety and nuclear waste management in Australia and this will adversely impact on public confidence in ARPANSA.

Questions for ARPANSA to answer in revised “*Information for Stakeholders*”:

Q: What integrity is left for the proposed ARPANS Act Site License process and decision?

Q: How will the CEO of ARPANSA address the real adverse impacts of the Resources Minister’s discretion to override both federal and state Aboriginal Heritage legislation and a range of other protections and due process that our society and in particular Indigenous Australians rely on?

Q: Given the proposed NRWMF siting decision is seriously compromised, ARPANSA should explain if the ARPANS Act Site License and Construction Licence processes are to be merged into one?

Effectively this is the same draconian situation that existed under the earlier *Commonwealth Radioactive Waste Management Act 2005* introduced by the Howard government to override State and Territory interests to protect community health, safety and welfare from the risks and impacts of nuclear wastes and to nullify Federal laws that protect against imposition of nuclear wastes.