

27 February 2020

To: **Senate Standing Economics Legislation Committee of Inquiry**

National Radioactive Waste Management Amendment Bill 2020 - public submission

Re: Flawed Federal process contrary to Nuclear Safety Committee advice and untenable *interim* nuclear waste storage *compromises* Safety & Security and Rights & Interests in SA.

Dear Committee Chairperson

Please consider this submission and my request to give Evidence as a Witness at a Hearing in SA.

The Bill's amendments to the *National Radioactive Waste Management Act 2012* further entrench failures of best practice and shortcomings of the Federal gov. process on these issues to date.

After 4 years of *solely* targeting SA sites (since April 2016) the Bill amends the Act to specify SA as a nuclear waste state and Napandee near Kimba as an above-ground *interim* Nuclear Waste Store.

The Bill entrenches proposed untenable *indefinite* above ground storage and unnecessary double / dual handling of ANSTO nuclear fuel wastes and Intermediate Level Wastes (ILW). The nuclear regulator ARPANSA states these wastes require radiation shielding, safe handling and security, and require isolation from people and from the environment for over 10,000 years.

The proposal is contrary to a range of public interest advice from the Nuclear Safety Committee (NSC) to the regulator ARPANSA and arguably [compromises safety and security in South Australia](#).

The Bill exposes the Federal government's failure to recognise that ARPANS Act Licensing may not be granted to the proposed Nuclear Store, leaving an amended Act stranded with a specified failed site.

The proposed Nuclear Store is *illegal* under SA Law passed by the State Liberal gov. in 2000 and is thereby intended to be *imposed* onto the community of SA contrary to our Parliament's express will.

Further, the Federal gov. practice to date has conspicuously failed to consult or engage the SA community on core plans to ship nuclear fuel waste to a Port in SA and to transport ILW across SA.

The Bill's proposed specification of Napandee as a Nuclear Store effectively [targets the Whyalla Port](#).

The "[Site Characterisation Technical Report: Napandee](#)" (DIIS, July 2018, *Proximity to ports* p.150) named Whyalla Port to take shipments of nuclear fuel wastes, in the event Napandee is specified.

Two shipments of reprocessed nuclear fuel wastes are intended to an SA Port, in 130 tonne TN-81 casks, within the first two years of operations of a Nuclear Waste Store at Napandee (p.152).

Some 100 x B-double 50 tonne loads of Intermediate Level Wastes (ILW) are also intended in the first four years of Nuclear Store operations at Napandee (p.152). The Report (p.157-158) states:

"It may be possible to have these containers shipped from Port Kembla to ports such as Whyalla"

The affected Eyre Peninsula, Whyalla and transport route communities have been denied a say on these Federal plans and now face potential serious reputational risks and material impacts. The Whyalla City Council states there has had no advice from Federal or SA gov's on use of the Port. Whyalla is targeted for nuclear waste shipments and should have a right to refuse untenable plans.

This flawed Federal gov. process is a direct breach of advice from the Nuclear Safety Committee in a letter to APRANSA CEO Dr Carl-Magnus Larsson (Nov 2016), NSC Chair Dr Tamie Weaver stressed the *"ongoing requirement to clearly and effectively engage all stakeholders, including those along transport routes"*, with the NSC stating such engagement *"is essential"*.

The NSC has also advised (2013) that dual handling transport for interim storage *"does not represent International Best Practice"* and *"also has implications for security"* and for safety.

Importantly, the proposed NRW Facility presents an unacceptable threat to impose nuclear waste against the express will of the Barngarla People, compromising their Indigenous rights and interests.

This Inquiry must Recommend repeal of overrides of Aboriginal heritage and traditions in the Act & in Bill. Then Premier of SA Jay Weatherill (Oct 2017) argued for recognition of an Aboriginal People's 'right of veto' over proposed nuclear waste storage and disposal on their traditional lands.

This flawed Federal gov. process has also divided and damaged the Kimba agricultural community and presents a reputational and material impact risk to their livelihood and community cohesion.

Overall these matters cut to the core of SA public interests at stake in a draconian Federal agenda.

Co-location of an above ground Nuclear Store alongside a Low-Level Waste Disposal Facility may fail.

The regulator ARPANSA has said it expects *separate* Licence Applications for the above ground Nuclear Store and for the Low-Level Waste Disposal Facility. The Federal gov. must not pre-empt nor take for granted the outcome of this separate ARPANSA Licensing process for a Nuclear Store in SA.

The Nuclear Store in SA is *unnecessary* given ANSTO capacity for Extended Storage at Lucas Heights.

My background experience is relevant: as an Australian Conservation Foundation (ACF) campaigner based in Adelaide over 1996 to 2011, including 5 years on the prior Federal attempt to impose a nuclear waste facility in SA (over 1998 to 2004) – another flawed process that had to be abandoned.

I was also a Witness as an individual on nuclear waste issues at a Hearing of the SA Parliament Joint Committee Inquiry on the Findings of the Nuclear Royal Commission, held in 2016.

I have made submissions to the Minister on Nuclear Waste Store issues (May 2017 - Attachment 5, & Nov 2018), provided a range of Briefing materials (see Attach's 1 & 2), and given media comments.

Please feel free to contact regarding any aspect of this public submission, by Mobile, Text or E-Mail.

Yours sincerely

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Independent Environment Campaigner

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Recommendations:

1. This Inquiry must Recommend repeal of the NRWM Act 2012 Section 12(1)(c) & 13(1), and of the Bill 34GA(1)(c) & 34GB(1), as unacceptable draconian overrides of existing State and Commonwealth due process legal protections for Indigenous people's heritage and traditions. In any case, the Senate should vote to repeal these override Sections.
2. The Inquiry to investigate and report on impacts of the proposed NRWM Facility, and of the Federal gov. process to date, on Aboriginal rights, interests and traditions. Including: the potential requirement for the Federal gov. to pass a Regulation to name and override the SA *Aboriginal Heritage Act 1988*, so as to legally impose the NRWM Facility over State law.
3. To investigate and report on Federal gov. preparedness for Extended Storage at Lucas Heights, given the nuclear regulator ARPANSA expects a separate License Application for the above ground *interim* Nuclear Waste Store, and the fact that Approval may not be granted.
4. To accept and act on Nuclear Safety Committee advice to ARPANSA stating proposed *dual handling* and *interim* above ground storage of nuclear fuel wastes and Intermediate Level Wastes does not represent International Best Practice and has "*implications for security*".
5. The proposed co-located above ground *interim* (indefinite, "*up to 100 years*") Nuclear Waste Store, compromises safety and security in SA, and in the public interest, must not proceed. Preferably, ANSTO continue Extended Storage at Lucas Heights, at least until scientifically defensible and public acceptable means of ultimate disposal may be realised.
6. To investigate and report on the potential requirement for the Federal gov. to pass a Regulation to name and override the SA *Nuclear Waste Storage (Prohibition) Act 2000*, so as to legally impose the NRWM Facility over public interest protections in this key State law.
7. The Federal gov. has conspicuously failed to engage and consult targeted port and transport route communities, with Whyalla a named required port to a specified Napandee site. This is contrary to Nuclear Safety Committee advice in 2016. Whyalla has a right to reject untenable Federal gov. plans. to impose reprocessed nuclear waste shipments. At a minimum, this Bill should be held over until proper engagement with all affected communities is undertaken.
8. The pending 'return' of reprocessed nuclear fuel wastes from UK must not be shipped to Whyalla Port - for indefinite above ground storage at Napandee. If returned to Australia, ANSTO must take responsibility for Extended Storage at the existing Waste Store at Lucas Heights - which was built with capacity to accommodate these UK wastes for over 40 years.
9. Public confidence in the integrity of a pending Environmental Assessment of the proposed NRWM Facility is compromised by the NRWM Act 2012 Sec. 13(1)(b), and the Bill 34GB (1)(b), specifically overriding operation of the *Environment Protection and Biodiversity Conservation Act 1999*. Sections overriding the EPBC Act should be repealed by the Senate.

Executive Summary – Safety & Security compromised in flawed NRWMF process

Since April 2016 the NRWM Facility process has solely targeted SA in a political agenda to impose an untenable above ground interim Nuclear Waste Store and associated required Port.

This Federal agenda proposes actions which are expressly *illegal* in SA, with the import, transport, storage and disposal of nuclear fuel wastes prohibited by the SA Liberal State gov. in 2000.

This *illegal* Store is primarily for ANSTO reactor nuclear fuel wastes & Intermediate Level Wastes (see p.11 & p.24) and is intended to be *co-located* at a proposed Low-Level Waste Disposal Facility site.

ANSTO unacceptably intends to double their Intermediate Level Waste (ILW) reactor waste stockpile without any waste disposal capacity, while the small inventory of States & Territories ILW wastes are reported as 'largely historical with only minor projected future arising'.

A decision to co-locate a Nuclear Fuel Waste Store in SA, made or confirmed at Cabinet level in 2018, is unnecessary and flawed and unacceptably *floats* International Best Practice (see p.16-21).

Lucas Heights is by far the best resourced and secure facility to responsibly manage ANSTO irradiated nuclear fuel waste & Intermediate Level Reactor Wastes in the long-term and until a scientifically defensible and publicly acceptable permanent disposal option may be arrived at.

Analogous prior proposed co-location of a nuclear fuel waste Store in SA was abandoned by the Howard government over Feb 2001 to mid-2004, while the then "National Radioactive Waste Repository" to take 'Low-Level' (300 year) wastes was intended to be sited near Woomera in SA.

The site selection process has been seriously compromised by Federal failure to follow "*essential*" advice of the Nuclear Safety Committee to the regulator ARPANSA (NSC advice to the CEO, Nov 2016) on the NRWMF plan: for "*transparency*" in decisions and for "*The ongoing requirement to clearly and effectively engage all stakeholders, including those along transport routes*" (p.13, 26-27).

This Nuclear Safety Committee (NSC) advice goes to two fundamental issues: First, this is a key SA State level stakeholder issue and has to be effectively addressed by the Federal gov. at that level.

Secondly, regional communities in named nuclear waste Port cities and along associated waste transport routes must be effectively and specifically engaged and taken into serious consideration throughout the NRWM Facility process. That includes the period of this Bill and this Senate Inquiry.

Transparency in NRWM Facility decision making is also essential but has been unacceptably lacking.

A nuclear waste port has always been a core requirement of siting a NRWM Nuclear Store in SA. See the Brief "*Napandee Nuclear Store site nomination also targets Whyalla Port*" (Attached at p.22-23).

In July 2018 the Federal gov. named Whyalla or Port Pirie as required nuclear waste ports facing decades of shipments of ANSTO reprocessed nuclear fuel waste imports to SA: With 2 shipments stated to be intended within the first 2 years of operations, including a shipment from the UK in the early 2020's and a shipment from Lucas Heights, then multiple future shipments direct from France.

In an arrogant flawed process, the Federal gov. named Port cities in SA in a Report posted to a website but failed to even inform the targeted SA communities, local gov.'s, State MP's and Media.

I broke this news to SA regional communities in lead story's on Southern Cross TV (6th Aug 2018) and in the Whyalla News (9th Aug 2018) - with the **Whyalla Mayor** saying Federal gov. plans to use Whyalla's port for nuclear waste: "*would require significant community consultation*", noting:

"In the past Whyalla has opposed any nuclear or radioactive shipping in this region".

The **Port Pirie Mayor** stated Council were '*blind-sided*' by the Federal gov. position to potentially require Port Pirie as a nuclear waste port (in strong ABC Radio News coverage 7th Aug 2018).

Whyalla or Port Pirie, and Port Augusta - named on a number of potential required nuclear waste transport routes, face "*occurrences of complete shutdown*" but are **excluded from having a say**.

SA communities also have a public interest right to be engaged on the Report that in the first 4 years of intended Store operations one hundred B-double truckloads of Intermediate Level Wastes, primarily ANSTO reactor wastes, are to be trucked into & across SA to a Nuclear Store at Napandee.

The site selection process has failed to engage SA communities or to answer Safety & Security Questions in transport of ANSTO irradiated nuclear fuel wastes to regional SA (p.14-15).

The SA Nuclear Fuel Cycle Royal Commission (NFCRC, 2016) concluded that terrorist attack scenarios are conceivable during the transport of nuclear fuel wastes & that if a cask was lost at sea and was irrecoverable the radioactivity that escapes is expected to affect thousands of cubic km of seawater.

This site specification process must answer key public interest Safety & Security and Reputational Risk Questions on intended nuclear fuel waste shipments into an SA Port and across SA, including:

- Comparable nuclear accident and marine contamination risks raised by the SA NFCRC;
- Conceivable terrorist attack scenarios as raised by the SA NFCRC;
- Implications for SA's clean & green reputation and for Eyre Peninsula agricultural exports.

The NRWM Facility plan for "*indefinite storage*" of ANSTO nuclear fuel wastes & Intermediate Level Wastes is not consistent with longstanding advice of the ARPANSA Radiation Health & Safety Advisory Council and of the Nuclear Safety Committee (NSC) on International Best Practice (p.16).

The NSC has also advised that *dual handling* transport for *interim storage* "*does not represent International Best Practice*" and "*also has implications for security*" and for safety (p.11-12, p.25).

ANSTO has produced irradiated nuclear fuel wastes & Intermediate Level Wastes at Lucas Heights for 60 years without any nuclear waste disposal capacity (or even a program to do so) and intends to continue this mal-practice for next 40 years under an OPAL Reactor Operating License to 2057.

It is an **untenable fact** that the proposed nuclear fuel waste Store in SA is intended to operate "*above ground for approx. 100 years*", however responsible management of ANSTO irradiated nuclear fuel wastes requires waste isolation from the environment for over 10,000 years (see p.17).

Safety & Security in SA is unacceptably compromised by this NRWMF process in importation and *indefinite* storage of irradiated nuclear fuel waste without any waste disposal capacity. A Nuclear Store in SA is also *unnecessary* given the viable option of Extended Storage at Lucas Heights (p.18).

ANSTO should and can retain nuclear wastes in viable responsible Extended Storage at Lucas Heights while determining a final disposal pathway in accordance with International Best Practice (p.18-21).

In 2015 ANSTO purpose-built an “*Interim Waste Store*” (IWS) at Lucas Heights with a conservative design operating life of 40 years to take reprocessed nuclear fuel waste shipments from both France & the UK. The IWS received the French waste in Dec 2015 and can take the UK waste due in 2020’s.

The Operating Licence for this Store at Lucas Heights “*is not time-limited*” and was approved by ARPANSA with a Contingency plan for this Store to operate for longer than 40 years, and potentially to store reprocessed nuclear fuel wastes “*until the availability of a final disposal option*”.

The ARPANSA CEO (Feb 2018) has formally addressed the “*Safety and Effectiveness of the Current Storage Facility*”, stating: “*ARPANSA has a high degree of confidence in the safety of this facility which is underpinned by an inspection and compliance monitoring program.*”

There is no manifest need for a Nuclear Waste Store in SA - other than a flawed Federal gov. agenda, and there is no Safety, Licensing or Technical reason to bring these hazardous nuclear wastes to SA.

Further, the Department of Industry (2014) reports Options for Lucas Heights to receive & retain decades of shipments of ANSTO reprocessed nuclear fuel wastes from France (see p.21), with:

“Intermediate Level Wastes to remain at ANSTO until policy and technological solution for permanent disposal ILW are determined.”

Contingency Option 1 is that the NRWMF does not proceed (a continuation of the practice over the last few decades). Option 2 b is a more likely Option that a NRWMF eventually proceeds to only take Low-Level Waste AND the proposed above ground co-located Nuclear Waste Store doesn’t proceed.

These Contingency Options to responsibly manage OPAL reactor nuclear waste have routine costings and provide for viable Extended Storage of Intermediate Level Nuclear Wastes on-site at by far the best resourced and most secure nuclear facility in Australia – ANSTO’s Lucas Heights.

There will be consequences if this Bill is passed. This flawed Ministerial specification of Napandee as an interim Nuclear Store will arguably go on to likely fail – just as multiple prior Federal nuclear waste dump programs have had to be abandoned.

Second, any claimed benefits of a ‘Low-Level’ Waste disposal stand-alone facility are again forfeit due to the *untenable* Nuclear Fuel Waste Store agenda AND **due to an overall lack of due process.**

Third, South Australian’s will organise to support an array of directly affected communities. To protect SA’s rights & interests from a Federal gov. plan to **impose** a nuclear dump & associated impacts onto SA community, and to reject this Bill’s inherent proposition to **over-ride** key SA Legislation and public interest protections in the SA ***Nuclear Waste Storage (Prohibition) Act 2000.***

In this regard, I commend the SA ALP State Conference passage of a Motion “***No Nuclear Waste Dump in SA***” (13 Oct 2018, see Attachment 4, p.28); AND commend Premier Weatherill’s position for a traditional owners ‘***right of veto***’ over Federal gov. siting of national nuclear waste storage & disposal facilities on their country (see p.9-10, & Attachment 6), as well representing SA public interests and warranting serious consideration and attention by this Senate Committee of Inquiry.

Federal *Imposition* of an *illegal* Nuclear Waste Store is contrary to Democratic Rights and Interests in SA:

Strong South Australian Legislation from both sides of politics to prohibit nuclear wastes are key evidence that this proposed NRWMF is fundamentally a State level public interest issue in SA.

Storage of nuclear wastes compromises the safety and affects the welfare of the people of South Australians – that’s why it’s prohibited by the SA ***Nuclear Waste Storage (Prohibition) Act 2000***.

The import, transport, storage and disposal of ANSTO irradiated nuclear fuel wastes in SA was prohibited under the political leadership of Liberal Premier John Olsen AO in 2000 (see p.28).

The Objects of this Act cover the key issues at stake - to protect our health, safety and welfare:

“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”

The NRWMF Store is *illegal* in SA as Parliament considered & rejected an analogous Store in 2000.

Labor Premier Mike Rann then extended legislative protections to prohibit other radioactive wastes.

The fact proposed NRWM Facility is *illegal* in SA is effective proof of intended Federal *imposition* of a nuclear waste dump on to the people of SA at state, regional and local community levels.

This Bill and the *NRWM Act 2012* (like the prior 2005 Federal legislation) is premised on draconian powers to override an array of State & Federal legislation “*to the extent that it would regulate, hinder or prevent*” actions to authorise a nuclear waste storage or disposal facility site or works.

Imposition over an array of due State (and potentially Federal) public interest legislative protections is *inherent* in this Bill and in the *NRWM Act 2012* and in the Federal site selection process to date.

This constitutes key evidence that the Bill exposes key SA rights and interests to risks and impacts.

South Australian’s exercised their democratic rights to “*prohibit the establishment of certain nuclear waste storage facilities in this State*” as the express will of the SA Parliament and of the people.

The Bill and NRWMF process seek to over-ride SA law and are an affront to Democratic Rights.

The Federal gov. has an obligation to learn the lessons from experience in failure of prior nuclear waste projects in Australia and Internationally (see NSC advice p.27) and must not deny serious community concerns in SA or try to override key public interest protections written into SA Law.

SA community rightly feel betrayed by continued Federal gov. imposition of such a flawed, divisive site selection process for an *illegal* nuclear waste dump expressly prohibited under State Law.

This Inquiry must investigate and report on the inherent Federal gov. plan to override the SA *Nuclear Waste Storage (Prohibition) Act 2000* so as to impose an illegal NRWM Facility in SA.

Including, on the provisions in the Bill to make a Regulation to name and override this key SA Act.

To Repeal the 2012 Act and the Bill's overrides of Indigenous Rights & Traditions:

The Bill's specification of Napandee near Kimba as a NRWM Facility site is contrary to the express will of the Barngarla People. This process has been deeply flawed from its inception through site 'nomination' by one party without the consent of the Traditional Owners of the region.

The broad Australian community have an obligation to respect and to protect Aboriginal rights and interests. This must be reflected in the Senate Inquiry's considerations, Report and Findings.

In addition to their express opposition, the Barngarla People's heritage, Song Lines & Story Lines, are protected by the SA *Aboriginal Heritage Act 1988* as Indigenous cultural values.

However: The Federal Minister holds a draconian discretion under the *National Radioactive Waste Management Act 2012* (NRWM Act) to over-ride both Federal and State Aboriginal Heritage Acts.

Sections 12 & 13 of the NRWM Act state that: "*the significance of land in the traditions of Indigenous people ... has no effect to the extent that it would regulate, hinder or prevent*" actions that are authorised by Section 11 *Selecting the site for a facility*. This is unacceptable in a modern era.

The Bill calls on the Senate to vote to instigate draconian Federal powers to override Indigenous people's traditions, rights and interests, as set out in and protected by any State law:

34GA 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: ...*

(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); ... 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 34G.

Further, the Bill at 34GA (2), (3) and (4) makes provision for Regulations to prescribe a law, or a provision of a law, of a State or Territory such that the prescribed law or provision has no effect. In fact, the NRWM Act and the proposed Bill appear to rely on the making of Regulations to name and prescribe State laws so as to contend to override them.

This Inquiry must investigate and report on whether the Federal gov. intends to make a Regulation to name & to override the SA *Aboriginal Heritage Act 1988* so as to impose the NRWM Facility.

In contrast, **SA Premier Jay Weatherill** called for traditional owners to have a "**right of veto**" over nuclear waste facility siting on their traditional lands (Letter to the Prime Minister, 24 Oct 2017, reported in *The Australian* 31 Nov 2017, see Attachment 6).

South Australian Premier Jay Weatherill has asked Malcolm Turnbull to give Aborigines the "final right of veto" over any site chosen by the federal government for the planned national radioactive waste dump. ...

*In the letter obtained by The Australian, Mr Weatherill said Aboriginal leaders were deeply concerned about the Hawker proposal and **urged the commonwealth to commit to "provide***

a local Aboriginal community with a final right of veto over any future facility proposed on their lands”.

<http://www.theaustralian.com.au/news/nation/bernardi-seeks-to-lift-ban-on-nukes/news-story/06ef1d96c74c833146722aueb88c3248>

The Premier raised the SA Nuclear Fuel Cycle Royal Commission, the Final Report’s statement that broad social consent was required to successfully deliver a nuclear waste facility, and the response of the SA Government in a community engagement process, stating:

“This engagement process was insightful and highlighted the need for a bigger conversation about how Aboriginal people want to be seen, valued and recognised, and on unfinished business from the past. In particular, Aboriginal people’s history with the nuclear industry demonstrates a need for significant healing.

In recognition, the South Australian Government committed to provide a local community with a final right of veto over any future facility proposed on their lands.

I recommend that the Commonwealth Government now consider adopting a similar policy position as part the National Radioactive Waste Management Facility process.”

Premier Weatherill had earlier committed to provide Aboriginal communities a right of veto over any proposed International nuclear waste facilities (Jay Weatherill, *The Advertiser*, Nov 18, 2016):

“...local Aboriginal people would be given a final right of veto on any future facility.

“A key finding of the citizens’ jury was the importance of listening to local Aboriginal communities. Their evidence to the jury was compelling.

“This final right of veto would exist if a proposed facility would affect their lands and would not be overridden by the broader community.

“Their voice must be heard and their consent is essential.”

Federal claims to “*not impose a facility on an unwilling community*” should exclude sites where the Native Title representative body opposes siting of nuclear waste facilities on their traditional lands.

It is not acceptable for the Federal gov’s definition and claim of ‘*broad community support*’ to so blatantly over-ride and ignore Aboriginal people’s express opposition as “*an unwilling community*”.

I commend the SA ALP State Conference Motion “*No Nuclear Waste Dump in SA*” (13 Oct 2018, see Attachment 4) to this Inquiry. In particular, the SA ALP commitment to support communities opposing the nomination of their lands or region for a dump site, and to support Traditional Owners and community members in the Kimba region of South Australia in their current struggle to prevent a nuclear waste facility being constructed in their region.

The Inquiry must Recommend Repeal of overrides of Aboriginal heritage and traditions in the Act & in Bill. The Inquiry should recognise that Aboriginal people’s ‘*voice must be heard, and their consent is essential*’ as a core part of any credible claim to “*broad community support*”.

Barnjarla People are calling on this Inquiry, and on the Senate, to honour the Federal gov’s claim to “*not impose a facility on an unwilling community*” by voting to not impose it on to them.

The above ground Nuclear Store is primarily over 95 % for Federal nuclear wastes:

The Federal gov. is compromising Safety and Security in SA with irradiated nuclear fuel waste intended to be shipped through Whyalla or Port Pirie (see p.22-23 herein) to go on to an *indefinite* (“for approx. 100 years”) above ground Nuclear Waste Store that is to be imposed on to SA.

Two shipments of nuclear fuel waste are intended in the first 2 years of Store operations.

Some 100 x B-Double truckloads (see p.179) of Intermediate Level Wastes (ILW) are also to be trucked into SA, primarily from Lucas Heights, in the first 4 years of Nuclear Store operations in SA.

ANSTO nuclear fuel wastes were *prohibited* by the SA State Liberal gov. in 2000 and ANSTO’s Intermediate Level Wastes (& Low-Level wastes) were *prohibited* by the State ALP gov. in 2003.

Imposed illegal transport and indefinite above ground storage of nuclear wastes is untenable:

The Federal nuclear regulator ARPANSA states that nuclear fuel wastes & Intermediate Level Reactor Wastes require radiation shielding and require isolation from the environment for over 10,000 years.

However, after 60 years ANSTO has no nuclear waste disposal capacity with none foreseeable for multiple decades while nuclear waste production is set to increase to more than double stockpiles.

SA faces decades of nuclear accident and terrorist risks & impacts in ANSTO nuclear waste shipments first from the UK & from Lucas Heights, with the next 40 years of ANSTO nuclear fuel waste to be shipped to SA as reprocessed nuclear wastes from France and potentially direct from Lucas Heights.

The [Australian Radioactive Waste Management Framework](#) (DIIS April 2018, p.4) reports total Intermediate Level Wastes at 1,770 m³ - with 95% (by volume) arising as Federal gov. wastes.

The Federal gov. plans to more than double Intermediate Level Wastes to produce a further 1,960 m³ over next 40 years, with 1,850 m³ (95%) of that arising from ANSTO Lucas Heights operations.

If this Bill is passed SA faces a total of approx. 210 x B-Double truckloads of Federal Intermediate Level Wastes in an agenda to more than double ANSTO’s 60 year stockpile of ILW over the next 40 years – all to be trucked into SA for *indefinite* above ground storage in regional SA.

In Contrast: States/Territories hold approx. 105 m³ of largely historical Intermediate Level Wastes (ILW), with a [Federal Review in 2014](#) projecting ‘only minor future ILW arising’. S/T’s ILW are set to fall from 5% of existing ILW to under 3% of ILW that is intended to be stored in SA.

Nuclear Safety Committee advice against dual handling transport for interim storage:

[Nuclear Safety Committee \(NSC\) advice to the CEO of ARPANSA \(Nov 2013\)](#) addresses Transport issues in a way that clearly predicates against proposed Federal gov. *indefinite* above ground Storage of ANSTO irradiated nuclear fuel waste and Intermediate Level Reactor Wastes in regional SA.

This NSC advice states that *dual handling* in transport associated with *interim storage* “**does not represent international best practice**”; and **raises implications for both safety and security** noting that “ANSTO already has comprehensive security arrangements in place” at Lucas Heights.

4. Transport

... The criteria of the [Waste Guide](#) “set out **international best practice**” (pp. 11); **this promotes transport of ILW directly to a final storage or disposal facility rather than to interim storage at another facility, as is currently being proposed for the ILW generated from the reprocessing of HIFAR used nuclear fuel.**

Thus, while transport of radioactive material has historically proved to have or present very low risks, **it would appear that the dual handling and transport process associated with interim storage does not represent international best practice.**

The Committee notes that the [SAFETY GUIDE: Safe Transport of Radioactive Material 2008 Radiation Protection Series Publication No. 2.1](#) **recommends contact time with the waste should be kept short.**

Dual handling also has implications for security, pursuant to [RPS 11. Code of Practice for the Security of Radioactive Sources \(2007\)](#). The Committee notes that ANSTO already has comprehensive security arrangements in place at its LHSTC site. (Emphasis added)

In: “Nuclear Safety Committee advice to CEO of ARPANSA regarding safety implications of waste stored in interim storage” (22 Nov 2013), see:
http://www.arpansa.gov.au/pubs/nsc/nsc_iwsadvice.rtf

The Federal gov. must stop compromising safety and security in SA with their *untenable* nuclear waste Storage plan and accept Extended Storage of nuclear fuel waste & ILW at Lucas Heights.

ANSTO has to take responsibility for its own nuclear waste and keep it secure at Lucas Heights.

The NRWMF Low-Level disposal site is also 95+ % for Federal – primarily ANSTO waste:

The “National Radioactive Waste Management Facility” (NRWMF) is really **two dumps in one** with a Low-Level (LL) radioactive waste disposal site (including wastes that require isolation for up to 300 years) which is also primarily over 95% for Federal gov. wastes.

Existing Federal gov. Low-Level wastes are reported at 4,967 m³. **In Contrast:** States & Territories held 200 m³ of Low-Level Radioactive Waste (estimate. [2014](#), p.12) at 5% of total Low-Level wastes.

Low-Level radioactive wastes are [also to double](#) (p.4) with a further 4.843 m³ of Federal Low-Level Waste over 40 years - with 4,685 m³ (97%) to arise from ANSTO Lucas Heights operations.

Many hundreds of truckloads of ANSTO Low-Level radioactive wastes are also to be dumped in SA.

An initial approx. 277 truckloads of existing ANSTO LL waste will come into SA, reported at 10 m³ of LL waste per truckload, with a further approx. 468 truckloads over next 40 yrs of ANSTO operations.

In Total: Toward 1,000 truckloads of ANSTO wastes could be dumped in SA (including de-commissioning waste from HIFAR reactor circa 2024 & from the OPAL reactor - after 2057).

Contrary to essential Nuclear Safety Committee advice: Federal gov. has failed to engage communities at targeted Port Cities & along waste transport routes:

Despite having been named by the Federal gov. as a required nuclear waste port in mid-2018, the Whyalla City Council's stated at a Council meeting ([Minutes 17th Feb 2020](#)) in response to public questions on proposed use of Whyalla Port for handling of nuclear waste and ILW:

"At this time Council has had no advice from Federal / State government agencies as to how or when this process may commence."

The Nuclear Safety Committee (NSC) of ARPANSA provided advice to the CEO in Nov 2016 on the plan for the NRWM Facility – "essential" advice which the Federal gov. has still failed to implement to date and has thereby compromised the site selection process (see Appendix 2, p.23-24). This important NSC advice, recommendations and stated requirements cover three key areas:

- Essential engagement with all stakeholders, including those along transport routes;
- Transparency in decision making regarding the NRWMF;

Nuclear Safety Committee advice states it is "essential" to clearly and effectively engage all stakeholders, including along transport routes "at the frequency, locations, and in the form appropriate to specific issues throughout the duration of this national long term project".

Transparency in decision making regarding the NRWMF is essential but has been seriously lacking.

The specified Napandee site is matched with core required nuclear waste Ports, with Whyalla and Port Pirie named in July 2018, and consequent associated waste transport route communities. However, the Federal gov. has systematically failed to comply with NSC advice that it is "essential" to engage with these SA communities throughout near 4 years of solely targeting SA postcodes.

Targeted nuclear waste Port communities, the wider Eyre Peninsula community, and the SA State-wide community must be effectively engaged *before* a Legislative site specification is made.

This important NSC advice to the CEO of ARPANSA includes the following (bold emphasis added):

*"...the Committee identified several components of this plan 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 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. Lessons from other industries show that a significant amount of time is required to build a relationship of trust with such a wide range of stakeholders. The objective is to allow stakeholders to consider the regulator as independent and to allow ARPANSA to identify, understand, and address the range of potential concerns raised by stakeholders;

...however, 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... Given the recognised examples where similar projects have failed both in Australia and internationally."

Safety & Security Questions over ANSTO nuclear waste Shipments to a Port in SA:

After four years of targeting regional communities in SA, the flawed NRWFM site selection process has failed to inform, engage and consult relevant communities on the potential impacts of nuclear waste storage & transport - including on key public interest Safety & Security and Reputational Risks.

Federal gov. should have to properly engage all relevant stakeholders, to be transparent and to properly answer a range of key public interest questions on intended multiple shipments of ANSTO nuclear fuel wastes into SA through an SA Port and on proposed *indefinite* above ground storage.

This must cover potential nuclear waste accidents and conceivable terrorist attack risks and impacts.

“In the event of a major nuclear accident, adverse impacts on the tourism, agriculture and property sectors could potentially be profound.”

SA Nuclear Royal Commission: ***Tentative Findings, Risks and Challenges, [Impacts on other Sectors](#)*** (Feb 2016, p.28)

The SA Nuclear Fuel Cycle Royal Commission (SA NFCRC) raised and considered potential Nuclear Accidents and Safety & Security issues in the transport of nuclear fuel wastes, with the Final Report, Appendix L *Transport Risk Analysis*, Conclusion, stating:

“...if a cask was lost at sea and was irrecoverable, there is a potential for some members of the public consuming locally sourced seafood to receive a very small dose of radiation”;

Further, the Final Report concluded that terrorist attack scenarios are conceivable during the transport of nuclear fuel wastes. With the potential scenario for rocket attack on the transport of nuclear fuel waste reported as having the greatest potential to cause a release of radiation (see NFCRC Final Report, May 2016, [Appendix L - Transport risk analysis](#) Conclusion, p.312).

A further Jacobs MCM desk top Report (15 April 2016, p.50) to the SA NFCRC assessed Safety and Risks in the transport of radioactive material to Australia also **Concluded** that radioactivity that escapes from an unrecovered and degrading nuclear fuel waste cask is expected:

“to be diluted in thousands of cubic kilometres of seawater”

see "[Safety and risks in the transportation of radioactive material to and from Australia](#)"

Q 1: What are the comparable marine contamination risks in this case of a co-located Nuclear Fuel Waste Store in SA with intended required requisition of use of a Port in SA for multiple shipments of ANSTO nuclear fuel wastes from the early 2020's over decades through to the 2060's, which corresponds to reported **marine contamination risks** cited in:

- Conclusions of the SA NFC Royal Commission Final Report [Appendix L - Transport risk analysis](#) Conclusion (May 2016, p.312)
- AND cited in Conclusions of the Jacobs MCM Report to the NFCRC "[Safety and risks in the transportation of radioactive material to and from Australia](#)" (15 April 2016, p.50)

Q 2: What are the wider implications for the Eyre Peninsula - including on the reputation of agricultural export industries, in the Federal gov plan to requisition a Port on Eyre Peninsula for multiple shipments of ANSTO nuclear fuel wastes from circa 2020-21 over decades through to the 2060's AND in proposed *indefinite* above ground Storage of nuclear fuel wastes near Kimba?

Q 3: In the event of a major nuclear waste accident during the period and stages of proposed Nuclear Store operations in SA what are the scale and type of potential adverse impacts on SA and on sectors in SA, which correspond to the reported potentially "*profound*" adverse impacts cited in:

- Findings of the SA Nuclear Royal Commission: *Tentative Findings, Risks and Challenges, Impacts on other Sectors* (Feb 2016, p.28)

Q 4: What are the conceivable terrorist attack scenarios in this case of a co-located Nuclear Fuel Waste Store at a NRWMF site in SA, and associated intended required requisition of use of a Port in SA & consequent nuclear waste transport onto a NRWMF site in regional SA, which correspond to reported conceivable terrorist attack scenarios cited in:

- Conclusions of the SA NFC Royal Commission Final Report [Appendix L - Transport risk analysis](#) Conclusion (May 2016, p.312)

Q 5: What the potential impacts on SA of the occurrence of conceivable terrorist attack scenarios in the period & stages of proposed NRWMF Store operations in SA, including in:

- Shipping of ANSTO nuclear waste off SA waters & through SA waters including the Gulf;
- Intended decades of nuclear waste Port operations in SA, with Whyalla and Port Pirie named as potentially required ports in Federal gov. reports in July 2018;
- Transport of ANSTO nuclear waste by road or rail from a requisitioned SA Port to a irradiated / reprocessed Nuclear Fuel Waste Store in regional SA;
- And in intended *indefinite* above ground storage of ANSTO irradiated / reprocessed nuclear fuel wastes at the specified Napandee site near Kimba?

Q 6: What type and scale and coverage of nuclear accident & terrorist attack scenario Insurance (if any) does the Federal government intend to provide to cover South Australia and to cover third parties for potential impacts & losses, in and associated with:

- Intended multiple shipments of irradiated / reprocessed nuclear fuel wastes into an SA Port;
- Transport of nuclear waste by road or rail from an SA Port onto a Nuclear Fuel Waste Store in regional SA as proposed at the specified Napandee site near Kimba;
- Intended *indefinite* above ground nuclear fuel waste storage operations at a NRWMF Store?

Q 7: What type and scale of coverage of nuclear accident & terrorist attack scenario Insurance (if any) did the Federal government provide for:

- The July 2018 shipment of ANSTO nuclear fuel waste out of Port Kembla in NSW to France;
- The Dec 2015 shipment of French reprocessed nuclear fuel waste to and through Port Kembla and by road on to the ANSTO facility at Lucas Heights?

**Indefinite Storage of ANSTO nuclear fuel wastes in SA flouts long standing
ARPANSA advice on International Best Practice:**

The ARPANSA Radiation Health and Safety Advisory Council (RHSAC, April 2010) have provided advice to the CEO that International Best Practice requires a strategy for ultimate disposal of waste and concludes that Australia's policy for *indefinite storage* of waste is not consistent, stating:

*"Hence, the overall picture of international best practice is that countries should have a policy and strategy for management of radioactive waste, in which storage has a legitimate temporary role **provided there is a further strategy for ultimate disposal of the waste.**"*

This also leads to the conclusion that Australia's current policy of indefinite storage for intermediate level waste does not appear to be consistent with international best practice.

In developing a national strategy it is necessary to ensure an appropriate infrastructure is in place to manage radioactive waste." (Emphasis added)

In: "COUNCIL ADVICE TO CEO REGARDING A REVIEW OF ISSUES RELATED TO THE MANAGEMENT OF INTERMEDIATE LEVEL RADIOACTIVE WASTE IN AUSTRALIA - APRIL 2010" (p.22) http://www.arpansa.gov.au/pubs/rhsac/waste_report_RHSAC.pdf

The ARPANSA Nuclear Safety Committee has also provided similar more recent advice to the CEO:

"2. Final Waste Management Prior to Activities Commencing

International best practice points to the need to have in place a policy and infrastructure for final management and ultimate disposal of waste before activities generating waste commence. Currently, there is no infrastructure for final disposal within Australia.

New facilities ANSTO proposes to construct at its LHSTC will generate additional waste requiring long-term storage or disposal. Approval may be granted to conduct activities generating waste provided adequate contingencies are in place. ...

The Committee, therefore, recommends that establishing a long-term storage and disposal facility prior to waste-generating activities commencing continues to be considered the preferred option for any licence application." (Emphasis added)

In: "Nuclear Safety Committee advice to CEO of ARPANSA regarding safety implications of waste stored in interim storage, 22 Nov 2013, http://www.arpansa.gov.au/pubs/nsc/nsc_iwsadvice.rtf

This Senate Inquiry must recognize and report on the fact that the NRWMF process and plan for *indefinite* above ground Storage of ANSTO irradiated nuclear fuel wastes & Intermediate Level Reactor Wastes in SA is not consistent with ARPANSA Radiation Health and Safety Advisory Council advice & Nuclear Safety Committee advice on required International Best Practice.

ANSTO has produced irradiated nuclear fuel wastes & Intermediate Level Reactor Wastes at Lucas Heights for 60 years without any nuclear waste disposal capacity (or even a program to do so) and intends to continue this mal-practice of nuclear waste production without a disposal capacity for decades to come through the OPAL reactor Operating License up to 2057.

The Nuclear Store to operate “above ground for approx. 100 years” compromises Safety & Security in SA, with ANSTO nuclear wastes requiring isolation for 10,000 years

A range of ARPANSA & ANSTO documents from 2015 on make clear the **untenable fact** that the proposed Nuclear Fuel Waste Store in SA is intended to operate “for approx. 100 years” - effectively indefinitely, for nuclear wastes that require isolation from the environment for 10,000 years.

For instance, documentation on the ANSTO “Interim Waste Storage Facility” (IWS) at Lucas Heights which is already storing reprocessed nuclear fuel waste shipped in from France in Dec 2015.

The ARPANSA “Regulatory Assessment Report – Operating” for the IWS (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.**”* (Emphasis added)

The ARPANSA “CEO’s Statement of Reasons for the IWS operating licence” (May 2015), at 3.Reasons for my Decision (p.14, 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.”

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>

ANSTO Nuclear Fuel Waste & Intermediate Level Waste require isolation for 10,000 years:

The ARPANSA draft Code for Disposal of Radioactive Waste (Dec 2017), among many official documents, makes clear that both nuclear fuel wastes & ILW require isolation for circa 10,000 years:

*Based on international best practice, an applicant needs to undertake a safety assessment ... over the very long timescales that are deemed appropriate by the Relevant Regulatory Authority (e.g. **10,000 years for disposal of intermediate level waste**); (p.51)*

*The proponent may impose a time cut-off in the assessment of passive safety ... **based on expectations from international best practice, for disposal of intermediate level waste should not be less than 10,000 years.** (p.53)*

See <https://www.arpansa.gov.au/code-disposal-solid-radioactive-waste-rps-c-3>

Napandee Nuclear Store is unnecessary given Lucas Heights capacity for Extended Storage

In 2015 ANSTO purpose-built an “*Interim Waste Store*” (IWS) at Lucas Heights with a conservative design operating life of 40 years to take reprocessed nuclear fuel waste shipments from both France and from the UK (equivalent to HIFAR reactor nuclear fuel wastes previously sent overseas).

This Store is operating at Lucas Heights, having received the French waste late in 2015, with a plan for its operations to accommodate the UK waste intended to be returned circa early 2020’s.

This intended UK shipment of reprocessed nuclear fuel waste can also go to Lucas Heights rather than continuing to target communities in SA - including through the *requisition* of a Port City in SA.

Both the UK and French reprocessed nuclear fuel wastes from ANSTO HIFAR reactor operations can be safely managed in Extended Storage in an existing facility at Lucas Heights for 40+ years.

The Operating Licence for the existing Store at Lucas Heights “*is not time-limited*”, was approved by ARPANSA with a Contingency plan for this Store to operate for longer than 40 years, and potentially to store reprocessed nuclear fuel wastes “*until the availability of a final disposal option*”.

Further, the Federal Industry Department (2014, in consultation with ANSTO & ARPANSA) reported an “*Initial Business Case*” for the NRWMF, with Contingency Options:

- for ANSTO nuclear fuel wastes and ILW to “*remain at ANSTO until policy and technological options for permanent disposal of ILW are determined*”;
- AND with potential *additional* Nuclear Fuel Waste Stores to be built at Lucas Heights for future shipments of OPAL reactor reprocessed nuclear fuel wastes on return from France.

ANSTO’s Lucas Heights is by far the best resourced and secure facility to responsibly manage the Extended Storage of all of Australia’s nuclear fuel waste including the intended accruals of OPAL reactor nuclear fuel waste and Intermediate Level Waste production through to the 2050’s.

Equally, ANSTO can manage OPAL reactor nuclear fuel wastes in Extended Storage at Lucas Heights rather than seek to impose these nuclear wastes onto un-willing communities in SA.

There is arguably no technical reason why ANSTO can-not also conduct Extended Storage of ILW on-site, at least through-out the period of ongoing Opal reactor licensed waste production to 2057.

ARPANSA evidence for viable Extended Storage of ANSTO nuclear wastes at Lucas Heights:

ARPANSA has made a submission (23 Feb 2018), to a Nuclear Inquiry “*Reprocessing nuclear fuel - France*” by the Joint Standing Committee on Treaties, regarding the “*safety and effectiveness of the current storage facility*” for nuclear fuel wastes at Lucas Heights, stating (at p.2):

“ARPANSA has a high degree of confidence in the safety of this facility which is underpinned by an inspection and compliance monitoring program.”

In: <https://www.aph.gov.au/DocumentStore.ashx?id=0739bc51-9403-4490-b0ce-c8cc6ed074a2&subId=563939>

There is no manifest need for a nuclear waste Store in SA other than a flawed Federal agenda:

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

“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.*

... 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 importantly to potentially store reprocessed nuclear fuel waste on-site “**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 (NRWMF) 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 "**CEO's Decision - ANSTO Interim Waste Store**" (May 2015) imposes a relevant Condition (see <http://www.arpansa.gov.au/pubs/regulatory/ansto/SOR-IWS.doc> p.25) that:

"The licence is not limited in time; however, the purpose of the facility is temporary storage of the waste, pending solution for its final management. The length of storage is contingent on the establishment of the NRWMF, or any alternative final management solution that may be considered in the future. It is therefore reasonable to request, at appropriate times, updated information as regards the performance of the IWS Facility, and projections for the future. I have therefore included the following licence condition:

The licence holder must submit to the CEO, no later than 30 June 2020 and in a form acceptable to the CEO, plans for the removal of waste stored in the facility."

However: The ARPANSA CEO's Condition does not require removal of the waste by June 2020 only *projections* of future plans for removal, subject to fruition - or not - of the proposed NRWMF.

This is confirmed in the ARPANSA submission to the JSCT Inquiry which addresses this issue:

"In addition, under condition 5 of the Interim Waste Store Licence, ANSTO must submit a plan, by no later than June 2020, for removal of the waste stored in the facility. The contents of the plan will be contingent on the progress made by the Department in establishing a NRWMF and establishing a final disposal pathway for Australia's Intermediate level waste.

*... However the NRWMF has not been established ... **ARPANSA would be the responsible regulator ... but is unable to pre-empt any regulatory decision or provide any estimate of timelines of when this may occur.**"* (Emphasis added)

It would be realistic & prudent for the Federal gov. and ARPANSA to prepare Contingencies:

- In the arguably likely case the proposed co-located Nuclear Store does not eventuate (just as it has not in preceding decades – without discernible impact on Lucas Heights operations);
- AND to provide for Extended Storage of nuclear wastes at Lucas Heights – while determining a final disposal pathway for nuclear wastes in accordance with International Best Practice.

There is no manifest need for a nuclear waste Store in SA other than a flawed Federal agenda.

See relevant ARPANSA public documentation and information available at: "**Interim Waste Store**" <http://www.arpansa.gov.au/regulation/ReturnofWaste/index.cfm>

And at: "**CEO's Decision - ANSTO Interim Waste Store**" <http://www.arpansa.gov.au/regulation/ReturnofWaste/iwsdecision.cfm>

Business Case Option for Intermediate Level Reactor Waste to stay at Lucas Heights

The ANSTO agenda for the OPAL reactor is premised on reprocessing of five decades of OPAL reactor nuclear fuel waste in France AND on proposed 'return' of these wastes to a Nuclear Store site in SA.

Arguably either or both of these agency preferences may fail to eventuate and leave OPAL stranded.

The Federal Department of Industry in consultation with ANSTO & ARPANSA produced a Business Case for the *Long Term Management of Australia's Radioactive Waste* (Jacobs SKM, April 2014) which set out two arguable more likely and more credible Contingency options:

- For shipments of ANSTO reprocessed nuclear fuel wastes from France to go to Lucas Heights
- And for ***"Intermediate Level Waste to remain at ANSTO until policy and technological solution for permanent disposal of ILW are determined"***.

In **Option 1** the NRWMF does not proceed (a continuation of the practice over the last few decades), and in **Option 2 b** the NRWMF proceeds to only take Low-Level Waste AND the proposed co-located above ground Nuclear Waste Store does not proceed.

"Table 14 List of options to meet the criteria:

Option 1 Business as Usual ("Do nothing"):

Continue as at present without long term radioactive waste management arrangements in place and operate via a series of interim storage measures for both the Commonwealth and the States and Territories (via ARPANSA-approved "contingency measures").

Propose separate ILW stores to be delivered at ANSTO prior to each separate delivery of OPAL Spent Fuel (to the design of the current IWS with a delivery cost of \$8M each) and a 1,000 m³ capacity LLW store to be constructed in 2016 and each decade thereafter (\$1M each) with associated operating expenses. (Emphasis added)

Further, **"Option 2 b"** also has ANSTO reprocessed nuclear fuel wastes returned to Lucas Heights in (an arguably likely) Contingency that if a NRWMF eventually proceeds it will only provide for Low-Level Waste Disposal in a Spanish style engineered above ground *El Cabil* design basis:

"Construct NRWMF with 100 years capacity for both legacy and future Low-Level Waste at (remote) site in accordance with the NRWM Act 2012 and ARPANSA Guidance.

ILW to remain at ANSTO until policy and technological solution for permanent disposal of ILW are determined. ... ILW storage to continue at ANSTO with foreseeable capital and operating costs as for the ILW element of the BAU. (Emphasis added)

In: *Long Term Management of Australia's Radioactive Waste, Initial Business Case (REVISED)*, Jacobs SKM report to the Federal Department of Industry, April 2014, Table 14, p.34.

See <http://www.radioactivewaste.gov.au/files/files/IBC%20revised%20FINAL.pdf>

These Contingency Options to responsibly manage OPAL reactor nuclear waste have routine costings and provide for viable Extended Storage of Intermediate Level Wastes *on-site* at by far the best resourced and most secure nuclear facility in Australia – ANSTO's Lucas Heights.

Napandee Nuclear Store site nomination also targets Whyalla Port:

Nuclear Brief (Feb 2020) by David Noonan, *Independent Environment Campaigner*

Amidst rising controversy, a Federal Minister has nominated Napandee near Kimba on Eyre Peninsula as a Nuclear Store to take reactor fuel wastes and long-lived wastes from Lucas Heights.

The "[Site Characterisation Technical Report: Napandee](#)" (DIIS, July 2018, *Proximity to ports* p.150) named Whyalla Port to take shipments of nuclear fuel wastes, in the event Napandee is named as a Nuclear Store. Two shipments of reprocessed nuclear fuel wastes, in 130 tonne TN-81 casks, are intended within the first two years of operations of a Nuclear Waste Store at Napandee (p.152).

Some 100 x B-double 50 tonne loads of Intermediate Level Wastes (ILW) are also intended in the first four years of Nuclear Store operations at Napandee (p.152). The Report (p.157-158) states:

"It may be possible to have these containers shipped from Port Kembla to ports such as Whyalla"

However, the Federal government has conspicuously failed to consult the SA community on plans to impose multiple shipments of nuclear waste across SA, including potentially through Whyalla Port.

This flawed practice is in continued breach of [advice of the Nuclear Safety Committee](#) (NSC) to the nuclear regulator ARPANSA (Nov 2016) on the NRWMF, on *transparency in decisions*, stating:

"The ongoing requirement to clearly and effectively engage all stakeholders, including those along transport routes." With the NSC stating that: *"Such engagement is essential..."*

Eyre Peninsula, Whyalla and transport route communities have so far been denied a say on these Federal nuclear waste plans and now face potential serious reputational risks and material impacts.

The [Australian Radioactive Waste Management Framework](#) (DIIS, April 2018, p.4) reports total Intermediate Level Wastes at 1,770 m³ - with 95% (by volume) arising as Federal government wastes.

The Federal gov. plans to more than double Intermediate Level Wastes to produce a further 1,960 m³ over next 40 years, with 1,850 m³ (95%) of that arising from ANSTO Lucas Heights operations.

All these nuclear wastes are intended to go to Napandee for up to 100 years above ground storage.

[Proposed indefinite above ground storage](#) of nuclear fuel wastes at Napandee may compromise safety and security in SA and contravenes Nuclear Safety Committee advice. [The NSC has stated](#) dual handling in transport associated with interim storage *"does not represent international best practice"* and raises *"implications for security"*. These federal nuclear plans are also *illegal* in SA.

The previous SA State Liberal government *prohibited* the import, transport, storage and disposal of nuclear fuel wastes and reprocessed wastes under the *Nuclear Waste Storage (Prohibition) Act 2000*.

"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."

ARPANSA states these nuclear wastes require isolation from the environment for 10 000 years.

Nuclear waste can pose serious Safety, Accident and Security Risks:

“In the event of a major nuclear accident, adverse impacts on the tourism, agriculture and property sectors could potentially be profound.”

SA Nuclear Royal Commission: *Tentative Findings, Risks and Challenges*, [Impacts on other Sectors](#) (Feb 2016, p.28)

Key questions on safety and security in nuclear fuel waste transport and storage remain unanswered (see [D Noonan submission to Minister Canavan](#), p.11-12). These wastes must not be allowed into SA.

The UK Nuclear Free Local Authorities “[Briefing: Nuclear security concerns – how secure is the UK civil nuclear sector?](#)” (NFLA, May 2016) highlights key security threats including the risks from potential malicious attack on a nuclear waste transport or on a nuclear waste storage site.

NFLA (p.8) cites the views of nuclear engineer Dr John Large on safety as at the heart of its concerns:

“Movement of nuclear materials is inherently risky both in terms of severe accident and terrorist attack. Not all accident scenarios and accident severities can be foreseen; it is only possible to maintain a limited security cordon around the flask and its consignment; ... terrorists are able to seek out and exploit vulnerabilities in the transport arrangements and localities on the route; and emergency planning is difficult to maintain over the entire route.”

NFLA Recommendations (p.15) call for real discussion on the aftermath of a nuclear security incident given the major emergency response issues that arise. That belated debate is yet to be heard in SA.

SA is arguable unprepared for the consequences of nuclear fuel waste accidents or security events.

[Hundreds of Police were required for security](#) at a 2018 nuclear waste shipment [out of Port Kembla](#).

Whyalla is targeted for nuclear waste shipments and should have a right to refuse untenable plans.

In “[Nuclear port potential](#)” (Whyalla News, 3rd August 2018, p.1) the Mayor said Federal gov. plans to use Whyalla’s port for nuclear waste: “*would require significant community consultation*”, noting:

“In the past Whyalla has opposed any nuclear or radioactive shipping in this region”.

DIIS’s Napandee Site Characterisation Report refers to potential “*occurrences of complete shutdown*” (p.154) in Iron Triangle Cities during nuclear waste shipments. This is unacceptable.

These are fundamentally State issues and the SA public have not given consent to proposed nuclear waste transport and storage. Under the leadership of Premier Steven Marshall the SA State Liberal government has a responsibility to protect the public interest and to uphold the law in our State.

The Marshall gov. must protect all SA regional communities and reject a Nuclear Waste Store in SA.

For further information, see: <https://nuclear.foe.org.au/waste>

Federal gov. nuclear waste compromises Safety & Security in SA:

Nuclear Brief (10 Nov 2018) by David Noonan, *Independent Environment Campaigner*

[The Federal gov. is compromising Safety and Security in SA](#) with ANSTO irradiated nuclear fuel waste to be [shipped through Whyalla or Port Pirie](#) to an *indefinite* (“for approx. 100 years”) above ground nuclear waste Store to be *imposed* on to SA at Kimba or at Hawker.

Two shipments of ANSTO nuclear fuel waste are intended in the first 2 years of Store operations.

[Some 100 x B-Double truckloads](#) (see p.179) of Intermediate Level Wastes (ILW) are also to be trucked into SA, primarily from Lucas Heights, in the first 4 years of Store operations in SA.

ANSTO nuclear fuel wastes were *prohibited* by the SA State Liberal gov. in 2000 and ANSTO’s Intermediate Level Wastes (& Low-Level wastes) were *prohibited* by the State ALP gov. in 2003.

Imposed *illegal* transport and *indefinite* above ground storage of nuclear wastes is *untenable*:

The Federal nuclear regulator ARPANSA states that nuclear fuel wastes & Intermediate Level reactor wastes require radiation shielding and require isolation from the environment for over 10,000 years.

However, after 60 years ANSTO has no nuclear waste disposal capacity with none foreseeable for multiple decades while nuclear waste production is set to increase to more than double stockpiles.

ANSTO practice & the intended Store in SA are contrary to [Nuclear Safety Committee advice to the CEO of ARPANSA](#) (Nov 2013) “regarding safety implications of waste stored in interim storage”, re:

“International best practice points to the need to have in place a policy and infrastructure for final management and ultimate disposal of waste before activities generating waste commence.”

SA faces decades of nuclear accident and terrorist risks & impacts in ANSTO nuclear waste shipments - first from the UK & from Lucas Heights, with the next 40 years of ANSTO nuclear fuel waste to be shipped to SA as reprocessed nuclear wastes from France and potentially direct from Lucas Heights.

The [Australian Radioactive Waste Management Framework](#) (DIIS April 2018, p.4) reports total Intermediate Level Wastes at 1,770 m³ - with 95% (by volume) arising as Federal gov. wastes.

The Federal gov. plans to more than double Intermediate Level Wastes to produce a further 1,960 m³ over next 40 years, with 1,850 m³ (95%) of that arising from ANSTO Lucas Heights operations.

SA faces a total of approx. 210 x B-Double truckloads of Federal gov. Intermediate Level Wastes in an agenda to more than double ANSTO’s 60 year stockpile of ILW over the next 40 years – all to be trucked or shipped into SA for *indefinite* above ground storage in regional SA.

In Contrast: States/Territories hold approx. 105 m³ of largely historical Intermediate Level Wastes (ILW), with a [Federal Review in 2014](#) projecting ‘*only minor future ILW arising*’. S/T’s ILW are set to fall from currently approx. 5% (by volume) to under 3% of ILW intended to be Stored in SA.

The proposed above ground Store in SA is *primarily* 95+ % for Federal gov. Nuclear wastes.

Nuclear Safety Committee advice against *dual handling* transport for *interim storage*:

[Nuclear Safety Committee \(NSC\) advice to the CEO of ARPANSA \(Nov 2013\)](#) addresses **Transport** issues a way that clearly predicates against proposed Federal gov. *indefinite* above ground Storage of ANSTO irradiated nuclear fuel waste and Intermediate Level reactor wastes in regional SA.

This NSC advice states that *dual handling* in transport associated with *interim storage* “**does not represent international best practice**” and raises “**implications for security**” and for safety, Noting that: “ANSTO already has comprehensive security arrangements in place” at Lucas Heights.

4. Transport

... The criteria of the [Waste Guide](#) “set out **international best practice**” (pp. 11); **this promotes transport of ILW directly to a final storage or disposal facility rather than to interim storage at another facility, as is currently being proposed for the ILW generated from the reprocessing of HIFAR used nuclear fuel.**

Thus, while transport of radioactive material has historically proved to have or present very low risks, **it would appear that the dual handling and transport process associated with interim storage does not represent international best practice.**

The Committee notes that the [SAFETY GUIDE: Safe Transport of Radioactive Material 2008 Radiation Protection Series Publication No. 2.1](#) **recommends contact time with the waste should be kept short.**

Dual handling also has implications for security, pursuant to [RPS 11. Code of Practice for the Security of Radioactive Sources \(2007\)](#). The Committee notes that ANSTO already has comprehensive security arrangements in place at its LHSTC site. (Emphasis added)

In: “Nuclear Safety Committee advice to CEO of ARPANSA regarding safety implications of waste stored in interim storage” (22 Nov 2013), see:

http://www.arpansa.gov.au/pubs/nsc/nsc_iwsadvice.rtf

The Federal gov. must stop compromising Safety & Security in SA with their *untenable* nuclear waste Storage plan and accept Extended Storage of nuclear fuel waste & ILW at Lucas Heights. ANSTO has to take responsibility for its own nuclear waste and keep it secure at Lucas Heights.

The NRWMF Low-Level disposal site is also 95+ % for Federal – primarily ANSTO waste:

Low-Level radioactive wastes (LLW) are [also to double](#) (p.4) from 4,967 m³ of Federal gov. LLW to add 4.843 m³ over 40 years - with 4,685 m³ (97 %) to arise from ANSTO Lucas Heights operations.

Many hundreds of truckloads of ANSTO Low-Level radioactive wastes are to be dumped in SA. An initial approx. 277 truckloads of existing LLW will come in to SA (reported at 10 m³ of LLW per truckload) with a projected further approx. 468 truckloads over next 40 years of ANSTO operations.

In Total: Toward 1,000 truckloads of ANSTO wastes could be dumped in SA over 40 yrs.

For further Information, see: <https://nuclear.foe.org.au/waste>

Attachment 3:

Our Reference: R16/12918

4 November 2016

Dr Carl-Magnus Larsson
Chief Executive Officer
ARPANSA
PO Box 655
Miranda NSW 1490, Australia

Nuclear Safety Committee

Advice to the CEO of ARPANSA

Dear Dr Larsson

I refer to Agenda Item 2.2 of the Nuclear Safety Committee (NSC) meeting held on the 18 March 2016 where the Committee provided you with their advice and recommendations relating to the ARPANSA Communication Strategy and Plan for the National Radioactive Waste Management Facility (NRWMF). The Committee discussed this topic further at the 17 June 2016 NSC meeting as additional information regarding project timeframes and progress was presented to the Committee.

The Committee considers the ARPANSA Communication Strategy and Plan for the NRWMF to be well developed and to contain elements that are required to manage the regulatory process and community expectations successfully. However, in both meetings, the Committee identified several components of this plan 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 are generally consistent with those identified by ARPANSA and 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. Lessons from other industries show that a significant amount of time is required to build a relationship of trust with such a wide range of stakeholders. The objective is to allow stakeholders to consider the regulator as independent and to allow ARPANSA to identify, understand, and address the range of potential concerns raised by stakeholders.
- The continued need for ARPANSA to be aware of, and informed by, case studies for similar scale projects in Australia and internationally. These case studies provide a range of examples of both successful and unsuccessful communication of technical and non-technical risks with stakeholders. The Committee discussed several case studies, highlighting the importance of identifying, understanding and managing technical, social, and economic

concerns raised by stakeholders. Those concerns are likely to vary between stakeholder groups and stakeholder concerns are likely to change over the course of such a long-term project. ARPANSA will need to be able to respond effectively and promptly to such changing concerns.

- The importance of integrating learnings and experience derived from effective stakeholder engagement in other industries and in the international nuclear community into the plan, and the requirement for the plan to be responsive and flexible for the duration of the project.
- The Committee emphasised the need to continue to engage with, rather than to just inform, stakeholders.
- The wide range of tools available for facilitating communication between stakeholders and ARPANSA was discussed with the recognition that ARPANSA will need to identify those tools that are considered most effective for reaching the wide range of stakeholders, and to develop an approach to the consistent and moderated use of such tools.

The Committee notes that ARPANSA has included the above in the ARPANSA Communication Strategy and Plan for the NRWMF; however, 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.

Yours sincerely

<SIGNED>

Dr Tamie Weaver
Chair of the Nuclear Safety Committee

Attachment 4

SA ALP State Conference

Saturday 13 October 2018

Motion 148: MUA/CEPU/NUW/RTBU/CFMEU/AMIEU/HSU

No Nuclear Waste Dump in South Australia

State Convention acknowledges that radioactive waste management is a complex policy challenge that requires the highest level of transparency and evidence and that the current federal approach to site a national waste facility in regional South Australia is strongly contested.

- Supports Traditional Owners and community members in the Flinders Ranges and Kimba regions of South Australia in their current struggle to prevent a nuclear waste facility being constructed in their region.
- Calls for full transparency, broad public input and best practice technical and consultative standards during the current site nomination and selection process.
- Expresses concern at the federal government's continuing focus on finding a single remote site for radioactive waste to be disposed (low level) and stored (intermediate level) to the exclusion of all other waste management options.
- Reaffirms its support for the civil society call for the extended interim storage of federal wastes at federal sites pending a broad independent inquiry that examines all options for future responsible radioactive waste, transport and storage and management.
- Commits to support communities opposing the nomination of their lands or region for a dump site, and any workers who refuse to facilitate the construction and operation or transport and handling of radioactive waste material destined for any contested facility or sites including South Australian Port communities.

Attachment 5: 28 May 2017

To: Senator The Hon Matthew Canavan
The Minister for Resources and Northern Australia

c/o The Department of Industry, Innovation and Science
National Radioactive Waste Section
radioactivewaste@industry.gov.au

RE: Proposed Federal government imposition onto community in South Australia of an illegal “100 year” Store for ANSTO’s “10 000 year” irradiated Nuclear Fuel Wastes.

Dear Minister

Storage of nuclear wastes affects the rights, interests and safety of all South Australians and is prohibited in our State under the *Nuclear Waste Storage (Prohibition) Act 2000*.

Proposed imposition of ANSTO reactor nuclear wastes is a major public interest concern in SA and detracts from public trust and confidence in the Federal government, in ARPANSA and in ANSTO.

The National Radioactive Waste Management Facility (NRWMF) comprises two co-located waste management facilities: an above ground 100 year Store for wastes that ARPANSA states require isolation for 10 000 years, AND a Disposal Facility for wastes requiring isolation for up to 300 years.

This submission focuses on the proposed imposition of the illegal Store & consequences thereof.

The Store is primarily for ANSTO irradiated Nuclear Fuel Wastes (NFW) and other existing and proposed reactor wastes, with only minor projected future arising’s of Intermediate Level Wastes (ILW) from States & Territories or from other Commonwealth agencies.

ARPANSA’s CEO (May 2015) has formally considered the proposed NRWMF Store and stated:

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

This *indefinite* storage plan compromises safety in importing nuclear waste to SA without a waste disposal capacity or even a requisite program for disposal of NFW and ILW.

ARPANSA’s Radiation Health and Safety Advisory Council (April 2010) has provided formal advice which concluded: *“that Australia’s current policy of indefinite storage for intermediate level waste does not appear to be consistent with International best practice.”*

The import, transport, storage and disposal of ANSTO irradiated Nuclear Fuel Wastes is illegal in SA and was prohibited under the leadership of Liberal Premier John Olsen in 2000:

“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”

Since April 2016 the NRWMF project has *exclusively* targeted community and environment in SA in an attempt to again impose an illegal Store for ANSTO’s irradiated Nuclear Fuel Waste in our State.

The Minister's release "*Kimba 90-day consultation begins*" (20 March 2017) invited submissions on potential approval under the *National Radioactive Waste Management Act 2012* of two nominated sites near Kimba for assessment as potential sites for the proposed NRWM Facility.

This is in-parallel with the Federal government targeting the iconic Flinders Ranges on the country of the Adnyamathanha people in a serious threat to their human rights and cultural interests.

These are fundamentally State level public interest issues and represent a multi-generational threat to community in SA: including intended Federal requisition of an as yet unnamed SA port for imposition of decades of irradiated Nuclear Fuel Wastes imports, along with affected stakeholders on transport routes, in addition to the rights & interests of community around a potential Store site.

The Federal government has unacceptably failed to take up the recent Advice of the ARPANSA Nuclear Safety Committee (4 Nov 2016) for transparency and for the essential "*ongoing requirement to clearly and effectively engage all stakeholders, including those along transport routes*".

This Store also exposes SA to unresolved security and potential terrorist risks in shipping, transport and indefinite above ground storage of irradiated Nuclear Fuel Wastes and other reactor wastes.

However, Lucas Heights is Australia's best placed institution and facility to responsibly manage ANSTO's Nuclear Fuel Wastes and can do so through-out the operating period of the Opal reactor.

An "Interim Waste Store" built at Lucas Heights in 2015 has a design life of 40 years and an approved purpose to take *both* the Nuclear Fuel Waste from France (NFW received Dec. 2015) and NFW to be received from the UK. The ARPANSA license for this Store "*is not time limited*" and has Contingency options to retain these NFW's at ANSTO "*until the availability of a final disposal option*".

The policy agenda to impose a NFW Store in SA is a flawed, unnecessary, contested and unsafe plan.

A broad public interest campaign protected SA rights and interests from prior Federal government attempts to impose nuclear waste facilities onto our State over 1998 to 2004 - and can do so again.

That "National Store Project" was *abandoned* - just as this NRWMF Store will have to be set aside.

Further, the Federal government's flawed policy agenda for *imposition* of nuclear waste effectively precludes a long term resolution to Australia's "Low-Level" radioactive waste responsibilities.

The Minister has an obligation to learn the lessons from experience in failure of prior projects in Australia and internationally and not to deny or override key public interest community concerns.

My background includes experience as an Australian Conservation Foundation (ACF) Campaigner over 1996 to 2011 based in Adelaide. Please feel free to contact to discuss this public submission.

Yours sincerely

Mr David J Noonan B.Sc., M.Env.St.

Independent Environment Campaigner

(Contact details and SA address provided in E-mail cover note)