



**AUSTRALIAN  
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**ACF submission to the Public Works  
Committee inquiry into the Australian  
Nuclear Science and Technology Organisation  
(ANSTO) Intermediate Level Solid Waste  
Storage Facility at Lucas Heights**

**July  
2021**



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Attention: Committee Secretary  
Public Works Committee  
Parliament House  
Canberra ACT 2600

By email to: [pwg@aph.gov.au](mailto:pwg@aph.gov.au)

Dear Members,

The Australian Conservation Foundation Inc (ACF) welcomes this opportunity to contribute to the Committee's consideration of the Australian Nuclear Science and Technology Organisation's Intermediate Level Solid Waste Storage Facility at Lucas Heights. ACF would further welcome presenting on the issues identified in this submission to any Committee hearing.

ACF is Australia's oldest national environmental organisation, founded in the mid-1960s with the support of eminent Australians, the Australian community and the Australian Government. ACF is strictly non-partisan and we are proud of our political independence. Over the past decades our independent advocacy has helped drive extraordinary commitments from governments of all political persuasions as well as from business and communities.

Since its creation ACF has been the leading national advocate for the environment. ACF protects, restores and sustains Australia's environment through research, consultation, education, partnerships and advocacy.

ACF has a long history of engagement and advocacy to promote responsible radioactive waste management, including active input into the Independent Advisory Panel that helped inform the current iteration of the National Radioactive Waste Management Project.

ACF maintains that radioactive waste needs to be managed safely for the long-term in accordance with international best practice, legal requirements and a clearly articulated economic need.

There has been no compelling public health, radiological or national interest case made for the planned national radioactive facility near Kimba in regional South Australia, especially in relation to the proposed management of Intermediate Level Waste (ILW).

Extended interim storage at existing federal facilities at ANSTO is possible, prudent and – coupled with a public options analysis - is far more likely to realise a lasting solution to our continuing radioactive waste management challenge.



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ACF supports this planned expenditure at ANSTO and maintains that ILW should remain securely stored at ANSTO until an agreed and evidence based long term management site and strategy is developed.

There is no credible public health, environmental or fiscal rationale or benefits from double-handling ILW. The building industry has a fundamental adage of ‘measure twice, cut once’. This prudent and proven approach should also underpin Australia’s management of ILW radioactive waste.

### Scale and context

Radioactive waste management in Australia has been a contested, divisive and ultimately non-productive area of public policy for decades. The timing and circumstances are now conducive for adopting a revised approach that is more likely to advance responsible national radioactive waste management and agreed and lasting outcomes.

ACF has identified several key foundation principles for responsible radioactive waste management in Australia. We maintain that radioactive waste management should:

- not impose any federal facility on an unwilling community or jurisdiction
- be consistent with state and territory laws and leading international industry practise
- reduce unnecessary double-handling of Intermediate Level Waste
- ensure high storage standards at the two secured federal sites where most of the waste is currently sited
- recognise the ANSTO nuclear facility at Lucas Heights is the best place to manage Australia’s worst waste until there is an agreed and integrated management approach
- inclusively and robustly examine the full range of future long-term management options.

Australia holds around 4250 cubic metres of low-level radioactive waste (LLW) and 655 cubic metres of long-lived intermediate level waste (ILW). Around 95% of this material is currently stored at two secured Federal sites. Nearly all of Australia’s intermediate level waste is held where it was created at the Australian Nuclear Science and Technology Organisation’s (ANSTO) Lucas Heights nuclear reactor facility in southern Sydney. This material is Australia’s highest-level radioactive waste and poses the most significant management challenge. Much of the low-level waste is at the Defence Department’s Woomera site in northern South Australia.

Australia’s highest-level radioactive waste is secured at the Lucas Heights nuclear reactor facility in southern Sydney and can be safely stored there for “decades to come.”



### **The National Radioactive Waste Management Project**

The current preferred federal plan involves (i) emplacing containerised low-level radioactive wastes (LLW) and covering these with earth and (ii) the extended above ground storage of intermediate level waste at a single site near Kimba on South Australia's Eyre Peninsula.

The LLW would be disposed of in-situ and there is no intention to recover this material.

There are plans to remove the higher-level ILW waste for future deep geological disposal at a location yet to be determined after a period of between 20 to 100 years.

The current national approach of double-handling intermediate level waste is not consistent best international practice.

Instead, it is based on unnecessary transport and handling and replacing above ground extended interim storage at ANSTO for above ground extended interim storage at a less resourced regional facility.

Former Resource Minister Matt Canavan identified the Napandee site near Kimba as the government's preferred waste location in February 2020.

Since this time the federal government has unsuccessfully sought to advance changes to Australia's radioactive waste laws to both cement this site and remove this from any independent legal review.

After being stalled in the Parliament for over a year due to concerns over the loss of judicial review revised legislation that restored legal review options was passed in June 2021.

There is considerable Aboriginal and wider community concern and opposition to the waste plan.

Existing state legislation, the SA Nuclear Waste Facility (Prohibition) Act 2000, makes the federal plan unlawful in SA and the SA Upper House has called for the project not to go ahead.

While the federal government could override any state legislative roadblocks, doing so would be inconsistent with leading practise for facility siting and open to regulatory and procedural contest.



### **The case for a revised approach**

Previous federal attempts over many years to impose a radioactive waste dump on multiple sites in regional South Australia and the Northern Territory have all failed and there is growing community and stakeholder concern over the Kimba plan.

Leading civil society organisations including environment, public health, Indigenous and trade union groups all support an expert, open and independent Inquiry into the full range of radioactive waste management options.

Radioactive waste remains a concern for thousands of years and its management demands the highest quality decision making and information.

Enhanced and extended interim storage at the two current federal facilities – particularly at ANSTO – offers a policy circuit-breaker and, coupled with an options review, is the best way to identify and advance lasting and responsible radioactive waste management.

Extended interim storage of Australia's intermediate level waste at Lucas Heights is the most prudent and credible management option, given that:

- the site is already home to the most problematic wastes as ANSTO is already both the continuing producer of and home to virtually all of Australia's higher level radioactive waste
- ANSTO has certainty of tenure, a secure perimeter and is monitored 24/7 by Australian federal police
- the waste will be actively managed as operations at the site are licensed for a further three decades
- it keeps waste management on the radar of the agency with the highest level of nuclear expertise and radiation monitoring and response capacity in Australia
- doing so avoids the unnecessary economic costs, risks and duplication of double-handling ILW waste
- ANSTO storage helps reduce any political or external pressure to fast-track a 'remote' site for a national facility and increases the prospects to advance responsible management
- ANSTO and the federal nuclear regulator ARPANSA both acknowledge that extended ILW storage is possible and secure
- there are no regulatory or radiological impediments to extended interim storage at Lucas Heights



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After community opposition and Federal Court action ended an earlier proposed waste site at Muckaty in the Northern Territory, ANSTO constructed and commissioned a new purpose-built store dedicated to housing reprocessed spent nuclear fuel waste which returned from France in late 2015.

**This Interim Waste Store has a conservative design life of 40 years, its licence is not time limited and it has (if required) regulatory approval to store these reprocessed wastes ‘until the availability of a final disposal option’.**

Extended interim storage at ANSTO has been previously identified as a credible and feasible option by ANSTO, nuclear industry lobby group the Australian Nuclear Association and, most importantly, the federal nuclear regulator, **the Australian Radiation and Nuclear Safety Agency (ARPANSA) CEO told a Senate Inquiry in June 2020 that intermediate level “waste can be safely stored at Lucas Heights for decades to come.”**

At the same Inquiry ARPANSA confirmed it “is aware that some stakeholders have interpreted ARPANSA’s decisions regarding the IWS as a requirement for relocation of the waste stored in the IWS, even suggesting that there is an urgent need for relocation. This is not correct. ARPANSA has not raised safety concerns regarding storage of waste at the IWS.”

ANSTO’s facility is prohibited from becoming a permanent disposal site, however there are no comparable constraints on it as a site for extended storage. Importantly, this approach also provides the ability to have an evidence based and open review of the best long-term management options.

### Conclusion

ANSTO has the capacity to continue to securely manage and store this ILW waste material for many years. This is important given ANSTO’s acknowledgement that any future national radioactive waste facility “is unlikely to commence receiving waste until after 2030” (ANSTO, 2).

ANSTO’s submission to this PWC review further states:

*This interim facility is the safest and most cost-effective option to secure waste and to manage it safely until the longer-term management solution is available.....ANSTO has the capabilities required to commission and oversee the construction of this facility and a track record of more than 60 years of safe and effective operation of storage facilities of this nature and management of existing wastes of this type (ANSTO submission, 3.3).*

ANSTO further maintains that the proposed ILW storage “*design has been successfully implemented on the ANSTO site in the past, with the existing waste storage facility still successfully in operation*” (ANSTO, 5.2.1).



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ANSTO further states that *“the facility will be protected by the same modern surveillance systems as are employed across the rest of ANSTIO and will be monitored continuously on site by Australian Federal Police Protective Services officers”* (5.12)

ANSTO concludes that the *“proposed facility is based on an existing design, which has been safely operating on site at Lucas Heights for decades. Modern control measures and construction techniques **will make the new facility even safer and more robust than the existing proven design upon which it is based.**”* (ANSTO, 7.7, our emphasis)

Such an approach with the extended interim storage of Australia’s highest-level wastes at ANSTO provides an opportunity to re-calibrate the national approach to this issue and advance a genuine assessment of longer-term management options.

The current federal proposal is one of considerable pain for scant gain and merely kicks the can further down the road. In the interests of all Australian’s ACF urges the Government to choose a different and more inclusive path to advance lasting and responsible radioactive waste management in Australia.

Nothing about nuclear waste is clean or uncomplicated but extended interim federal storage at existing sites, coupled with a wider robust public review of the full range of longer-term management options – is the approach that is most likely to advance and realise lasting and responsible radioactive waste management in Australia.

A measured, transparent and evidence-based approach to radioactive waste management provides our best chance to achieve a credible and lasting result for us and all future Australians. This is best made possible through the adoption of extended interim ILW storage at ANSTO until a lasting management site and strategy is realised.

If you have any questions in relation to this submission or to organise an ACF presentation to the Committee, please contact ACF nuclear policy analyst Dave Sweeney.

Yours sincerely,

Dave Sweeney

