



Advancing responsible radioactive waste management in Australia.

Briefing note: April 2020

Overview:

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.

Key foundation principles for responsible radioactive waste management in Australia include:

- not imposing any federal facility on an unwilling community or jurisdiction
- acting consistently with state and territory laws and leading international industry practise
- ensuring high storage standards at the two secured federal sites where most the waste is sited
- an inclusive and robust examination of the full range of future long-term management options.

Scale and current context:

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. Most of the low-level waste is at the Defence department's Woomera site in northern South Australia.

The National Radioactive Waste Management Project:

The current preferred federal plan involves emplacement and covering of containerised low-level radioactive wastes and above ground storage of intermediate level waste at a single regional 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.

Since April 2016 South Australia has been the only jurisdiction under active consideration as a site for a federal radioactive waste facility. Three sites, one at Barndioota in the Flinders Ranges and two near Kimba on the Eyre Peninsula, were under consideration, with former Resource Minister Matt Canavan identifying the Napandee site near Kimba as preferred in February 2020.

There is considerable Aboriginal and wider community concern and opposition to the waste plan. Existing state legislation, the Nuclear Waste Facility (Prohibition) Act 2000, makes the federal plan unlawful in SA. 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 employment and economic opportunities provided by the federal radioactive waste plan are modest. There would be some short-term fencing and construction work and there is uncertainty and challenge to the proponents claim of forty five jobs. There is also a 'community benefit fund' and associated infrastructure and training packages of around thirty million dollars.

The case for a revised approach: Extended interim storage and option assessment:

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 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, particularly at Lucas Heights given this site is already home to the most problematic wastes, is prudent and credible 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
- Storing the waste at ANSTO means the waste will be actively managed as operations at the site are licensed for a further three decades. It also keeps waste management on the radar of the agency with the highest level of nuclear expertise and radiation response capacity in Australia
- After community opposition and Federal Court action ended an earlier proposed waste site at Muckaty (NT) 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 forty years, its license is not time limited and it has (if required) regulatory approval to store these reprocessed wastes 'until the availability of a final disposal option'
- Extended interim storage at ANSTO helps reduce any political or external pressure to fast-track a 'remote' site for a national facility and increase prospects to advance responsible management
- 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).

There is no regulatory or radiological impediment to extended interim storage at Lucas Heights. 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.

Nothing about the nuclear industry, especially nuclear waste, is clean or uncomplicated but extended interim federal storage - 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.

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