

Nuclear fuel waste: Extended Storage at Lucas Heights or *target SA?*

Briefer (Nov 2017) by David Noonan, Independent Environment Campaigner

The Federal government has divided Australian community and is compromising safety in proposed import and indefinite above ground storage of ANSTO nuclear wastes in South Australia.

Since April 2016 the Federal government has *solely* targeted regional communities in SA for a proposed above ground Store to take irradiated Nuclear Fuel Waste (NFW) and long lived Intermediate Level Waste (ILW) from the ANSTO Lucas Heights reactor facility in NSW.

The ARPANSA CEO formally considered this proposed NRWMF Store and stated in May 2015:

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

This nuclear waste storage plan compromises safety by importing long lived reactor waste to SA without any waste disposal capacity or even a program or plan for potential disposal of NFW and ILW. Safety requires these nuclear wastes are isolated from the environment for over 10,000 years.

The proposed 100 year Store in SA for 10,000 year nuclear wastes is a divisive, unsafe and unnecessary plan - given ANSTO’s capacity to retain these nuclear wastes at Lucas Heights.

Federal Contingency options to store Nuclear Fuel Wastes at Lucas Heights:

ANSTO has produced and stored Nuclear Fuel Waste and ILW at Lucas Heights since the 1950’s. ARPANSA approved the current OPAL reactor Operating License from 2007 through to 2057 *“despite no reactor waste infrastructure long term storage or disposal being in place”*.

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 Wastes from France and from the UK, equivalent to Lucas Heights NFW that had been sent overseas from the previous HIFAR reactor.

This NFW Store is operating at Lucas Heights, having received the French waste late in 2015, and has a plan for its operations to accommodate the waste intended to be returned from the UK circa 2020.

The Licence for this NFW Store *“is not time-limited”* and has a Contingency plan to operate for longer than 40 years, potentially to store reprocessed NFW *“until the availability of a final disposal option”*.

Lucas Heights also holds the first decade of OPAL reactor NFW in pool storage. This is intended to be shipped to France for reprocessing with a first ‘return’ of OPAL reprocessed NFW due 2028 on.

In 2014 the Industry Department in consultation with ANSTO & ARPANSA reported an *“Initial Business Case”* with Contingency options for NFW and ILW to *“remain at ANSTO until policy and technological options for permanent disposal of ILW are determined”*. With proposed additional NFW Stores to be built at Lucas Heights for shipments of OPAL reprocessed NFW from France.

ANSTO’s Lucas Heights is by far the best resourced and secure facility to responsibly manage the extended storage of Australia’s existing nuclear waste and the intended accruals of OPAL reactor NFW and IL waste production through to the 2050’s. There is no licensing or technical reason why Lucas Heights can-not conduct extended storage of these nuclear wastes.

Target SA: Federal *failure to consult* on required Nuclear Port & waste transport routes

In Nov 2016 the ARPANSA Nuclear Safety Committee advised the CEO that stakeholder engagement along transport routes is required for transparency on future licensing decisions on the NRWMF.

Over the last two years the Federal government has failed to consult with community on a required Nuclear Port & reactor waste transport routes consequent to proposed siting of a NFW Store in SA:

- Proposed shipping of UK reprocessed Nuclear Fuel Wastes (NFW) direct to an unnamed SA Port in circa 2020, then road & or rail transport onto a NFW Store site in regional SA;
- Intended transport of French reprocessed NFW currently held at Lucas Heights to a proposed Store site in SA, with likelihood to utilise shipping through an SA Port after 2020;
- Proposed multiple shipments of OPAL reactor reprocessed NFW from France direct to an SA Port, with the first shipment scheduled from 2028 on and shipments continuing to 2060's;
- Potential future direct transport of Nuclear Fuel Waste from Lucas Heights to a Store in SA if French reprocessing does not continue through-out OPAL reactor operation into late 2050's;

In addition to decades of Nuclear Fuel Waste shipments to be imposed through an as yet unnamed SA Port, a few hundred truckloads of reactor wastes are intended to be brought into SA:

- Truck transport of ANSTO's existing long lived Intermediate Level reactor wastes (ILW) of approx. 450 m³ from Lucas Heights in NSW to a proposed Store site in regional SA;
- A projected further 500 m³ of long lived ILW to be produced by ANSTO in OPAL reactor operations up to 2050's, which is to be periodically trucked to a Store site in regional SA;
- An approx. 200 truckloads of ANSTO's existing Low Level (LL) reactor wastes (approx. 2 000 m³ at 10 m³ of LL waste per truckload) with decades of further reactor wastes trucked to SA;
- HIFAR reactor decommissioning waste, scheduled circa 2024 on, of up to approx. 1 000 m³ of mixed Low Level and Intermediate Level reactor wastes to be trucked into SA;
- The OPAL reactor will eventually also be decommissioned and cut up and trucked into SA;

The proposed Intermediate Level Waste Store is *predominantly* for ANSTO reactor wastes

The Federal government's proposed *indefinite* above ground radioactive waste Store in SA is predominantly for ANSTO reactor wastes. ANSTO holds an existing inventory of approx. 450 m³ of Intermediate Level reactor wastes and intends to more than double that inventory through decades of OPAL reactor waste production. In comparison, 100 m³ of ILW is held by other Federal agencies (CSIRO & Defence) and 105 m³ of ILW is held by States & Territories. These are largely historical wastes, with the Federal Industry Department projecting only minor future ILW arising.

The SA State Liberal government legislated to *prohibit* Nuclear Fuel Waste in 2000

Liberal Premier John Olsen prohibited the *import, transport, storage and disposal* of Nuclear Fuel Waste and reprocessed reactor wastes. Labor Premier Mike Rann extended legislative prohibitions to other classes of radioactive wastes. The Federal gov's proposed waste Store is illegal in our State.

Political parties in the 2018 SA Election must protect SA from the threat of radioactive waste dumps.

For further information see: <http://archive.foe.org.au/waste> and www.dontdumponsa.net