

Safely managing Australia's radioactive waste

Nuclear medicine produced by ANSTO has benefited generations of Australians since the 1960s. With benefits come responsibilities, and the by-product of nuclear medicine includes radioactive waste. Australia responsibly manages this waste in both the long and short term.



What is nuclear medicine?

One in two Australians are likely to need nuclear medicine at some point in their life. Nuclear medicine helps with the diagnosis of heart diseases, skeletal injuries, and a range of cancers. It is also used to treat diseased organs or tumours.

If you have had a CT SPECT scan, it is likely the nuclear medicine used in your procedure came from the ANSTO Lucas Heights campus in the Sutherland Shire. In fact, ANSTO supplies 85 per cent of Australia's nuclear medicine, which is distributed each week to around 250 hospitals and health practices right across Australia.



ANSTO's nuclear medicines are used to diagnose and treat a wide range of illnesses including cardiac conditions, cancers and skeletal injuries.



Each week ANSTO delivers over 10,500 patients doses of potentially lifesaving nuclear medicine to hospitals and medical practices across Australia.

Australia's radioactive waste returned from France in 2015

For nearly fifty years - between 1958 and 2007 - ANSTO's now decommissioned HIFAR reactor enabled the production of millions of doses of nuclear medicine. The spent fuel rods from the reactor were sent to France for reprocessing. The radioactive waste was returned to Australia in December 2015, in line with international agreements around radioactive waste management.

The radioactive waste that returned from France is equivalent in volume to one third of a regular shipping container. However, the waste is immobilised in glass, shielded by lead, and is inside a purpose-built storage container. People can safely stand next to the container without the need for protective clothing or equipment.

Interim storage of radioactive waste returned from France

ANSTO has over sixty years of expertise in nuclear science and research. This is why the Australian Government asked ANSTO to site and temporarily store the returned radioactive waste until the National Radioactive Waste Management Facility is built.

ANSTO has built an interim waste store which will house the waste until it is transferred to the national facility.

Long term storage of radioactive waste in Australia

At present, more than 100 sites across Australia are licenced to store low and intermediate level radioactive materials on an interim basis. This includes sites at ANSTO, as well as in metropolitan areas and regional towns and cities. Although safe, these storage conditions are temporary or not designed for disposal and long term storage. Many of those facilities are also nearing capacity.

A purpose-built national facility is the safest and most cost effective way to manage radioactive waste disposal and storage over the long term. The Australian Government is currently seeking an appropriate site for Australia's national radioactive waste management facility. The selection process is based on voluntary nomination by landholders and is being run by the Department of Industry, Innovation and Science in accordance with the *National Radioactive Waste Management Act (2012)*.

Further information

For more information about the national facility please visit www.radioactivewaste.gov.au

For more information about the interim waste store please visit www.ansto.gov.au/managingwaste



As the leader of nuclear science and research in Australia, ANSTO has safely managed radioactive waste for over 60 years.



Once a central waste facility is built in Australia, ANSTO's inventory of solid waste will be relocated to that facility.

LOCATIONS

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