

RADIOACTIVE WASTE: INFORMATION FOR COMMUNITIES

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FINDING A DUMP:

NATIONAL RADIOACTIVE WASTE MANAGEMENT PROJECT (NRWMP)

The federal government wants to build a single facility to both bury and store radioactive waste produced by federal and state agencies. The current search for a site follows a successful eight-year community campaign to stop a radioactive waste dump being built at Muckaty, 120km north of Tennant Creek in the Northern Territory. Before that a proposal for a dump near Woomera in South Australia was scrapped in 2004.

Landholders across Australia were given from March to May 2014 to nominate land for the federal government's consideration.

There has been limited transparency and public accountability in the process, as details of the nominations will not be released prior to the shortlisting. This secrecy makes it very difficult for affected communities – people with cultural connections to the sites or those along possible transport routes – to voice their opposition before possible sites are announced.

Radioactive waste earmarked for the national waste dump is classified as either low-level waste or long-lived intermediate-level waste.

A DUMP SITE:

BUT WE NEED A SINGLE DUMP SITE, DON'T WE?

The federal government has failed to make a compelling argument for its planned national dump.

- The government has previously said that it can continue to store the nuclear waste at the Lucas Heights nuclear site operated by the Australian Nuclear Science and Technology Organisation (ANSTO).
- ANSTO says it "is capable of handling and storing wastes for long periods of time. There is no difficulty with that."
- The Australian Nuclear Association says: "It would be entirely feasible to keep storing [nuclear waste] at Lucas Heights."

If a dump was considered necessary a detailed and comprehensive site selection study needs to be done based on transparent scientific and environmental criteria and informed community consent.

THE WASTE:

WHERE IS THE RADIOACTIVE WASTE COMING FROM?

Measured by radioactivity (rather than volume) almost all of the waste comes from the Lucas Heights nuclear reactor site in southern Sydney.

Measured by volume, Lucas Heights accounts for almost half the waste, lightly-contaminated soil stored at Woomera in SA accounts for about half and very small volumes are stored at various scientific, medical and defence sites around Australia.

The low-level and short-lived intermediate-level radioactive wastes are destined for shallow burial. The long-lived intermediate-level waste would be stored above ground as an 'interim' measure until some future government may establish a deep underground geological disposal facility.

No federal government has made any progress finding a site for disposal of the long-lived intermediate-level waste so 'interim' storage would last for decades and possibly centuries.

WASTE DUMP TIME LINE

1992	The Australian government begins a nation-wide survey to house a Low-Level Waste (LLW) repository.	2005	Federal Government announces a new site assessment process, naming three Department of Defence sites in the Northern Territory.
1998	Sites in South Australia's north are chosen to host a shallow LLW repository and an above ground facility for Intermediate-Level Waste (ILW).	2007	A site on the Muckaty Land Trust is nominated by the Northern Land Council. The nomination was met with opposition from many Traditional Owners and the local community in Tennant Creek, trade unions, environment, anti-nuclear and social justice groups and wider Aboriginal organisations.
1998	The Kupa Piti Kungka Tjuta launches a campaign to fight the waste dump.	2010	Muckaty Traditional Owners initiate a federal court action challenging the dump site nomination.
1998	Pangea Resources plan for an international high-level radioactive waste dump in WA sparks widespread concern and opposition.	2014	Federal Government agrees not to pursue Muckaty as a waste dump site.
1999	Western Australia passes the Nuclear Waste Storage (Prohibition) Act 1999.	March 2015	Federal Industry Minister Ian Macfarlane calls for landholders to nominate sites across Australia.
2000	South Australia passes the Nuclear Waste Facility (Prohibition) Act 2000.	September 2015	Josh Frydenberg MP appointed as Minister for Resources, Energy and Northern Australia, overseeing the National Radioactive Waste Management Project.
2001	Woomera is announced as the preferred dump site – a move met with strong opposition from the Traditional Owners – Kupa Piti Kungka Tjuta, State Government, Unions, Environment Groups and wider community.		
2004	Following community pressure and state government legal action the federal government abandons its SA waste dump plan.		

LEGISLATION

The National Radioactive Waste Management Act (NRWMA) is the Commonwealth legislation governing waste management.

Under state and territory laws it is illegal for intermediate-level waste to be stored in Western Australia, South Australia, Victoria, Queensland or the Northern Territory. However under the NRWMA, the Federal Resources Minister can override any state or territory legislation.

Former Federal Resources Minister Ian MacFarlane had said that only sites that are volunteered will be accepted, but it is unclear what will happen if a nomination comes from a landowner in a state/territory where waste storage is illegal. It is also unclear how consent from the local community will be assessed.



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NUCLEAR MEDICINE

WHAT ABOUT THE WASTE?

Doctors use radioactive materials for treating sick people. But the government should not say nuclear medicine is the main reason for having a remote radioactive dump.

Very little of the waste that would be sent to a national facility would come from medicine and this can easily be stored at Lucas Heights.

WHAT ABOUT MEDICAL WASTE CURRENTLY BEING STORED IN CITIES?

Some scientific and medical institutions produce radioactive waste – typically at very low levels, and with small accumulated stockpiles that require on site storage. One government document suggests that waste stores would be cleared out once every five years if and when a centralised repository was established. Places that use radioactive materials must have the institutional capacity to safely manage and store radioactive waste even if waste is periodically removed.

There has been sustained information deficiencies and errors and a lack of clarity regarding existing waste stores. Claims have repeatedly been made that waste stores are inadequate (e.g. hospital car-parks, filing cabinets and basements) to justify remote repository projects. Former Resources Minister Ian Macfarlane said in September 2014 that current waste stores are “very, very safe”. (SBS 30 Sept 2014)

It is important to note that even while arguing that existing waste stores are inadequate, successive federal governments have shown no interest whatsoever in upgrading waste stores – including those that will continue storing waste even if an off-site disposal or storage option becomes available. It makes little sense for the federal government to repeatedly cite the existence of state-based radioactive waste stores as a key reason for advancing a national radioactive waste facility while taking negligible interest in the operation and status of these stores.

DIFFERENT TYPES OF WASTE

WHAT IS LOW-LEVEL WASTE?

Low-level waste takes around 300 years for the radioactivity to decay to background levels. It would likely be buried in a trench 15-20 metres deep and must be kept away from water and from soil where plants are growing. This waste will remain at the dump site forever.

The inventory includes ten thousand drums of radioactive soil currently stored in a shed at Woomera, SA. This was left 50 years ago by scientists studying mining of radioactive rock.

Other waste would come from places around Australia where people have been studying radioactive rocks, materials and energy. This includes the Lucas Heights nuclear research reactor near Sydney.

WHAT IS INTERMEDIATE-LEVEL WASTE?

The most dangerous waste produced in Australia is classified as long-lived intermediate-level waste. This waste needs to be kept safe for thousands of years or more.

At the moment there is over 500 cubic metres of intermediate-level waste.

This will not be buried. It will be kept in dry storage in a large, above ground shed.

The most hazardous nuclear waste is produced at Lucas Heights. A small amount of intermediate-level waste may come from industry and universities.

The Lucas Heights nuclear reactor's fuel rods are sent overseas for reprocessing and the reprocessing waste – which is just as radioactive and toxic as the fuel rods – is to be returned to Australia.

The first shipment will come back at the end of 2015 and be taken to Lucas Heights for storage until a national store may be built.

WHAT IS INTERNATIONAL AND HIGH-LEVEL WASTE?

Australia does not produce any waste classified as high-level. A National Nuclear Store or Repository site is excluded from storing or disposing of international nuclear wastes, however the importation of international nuclear wastes is not illegal under Commonwealth law and is a discretionary power of the Minister for Health. No state or territory government can on its own authorise the import of international nuclear wastes to Australia.

However, the South Australian Nuclear Fuel Cycle Royal Commission is looking at the ‘opportunities and risks’ of having an international high-level waste facility in SA.

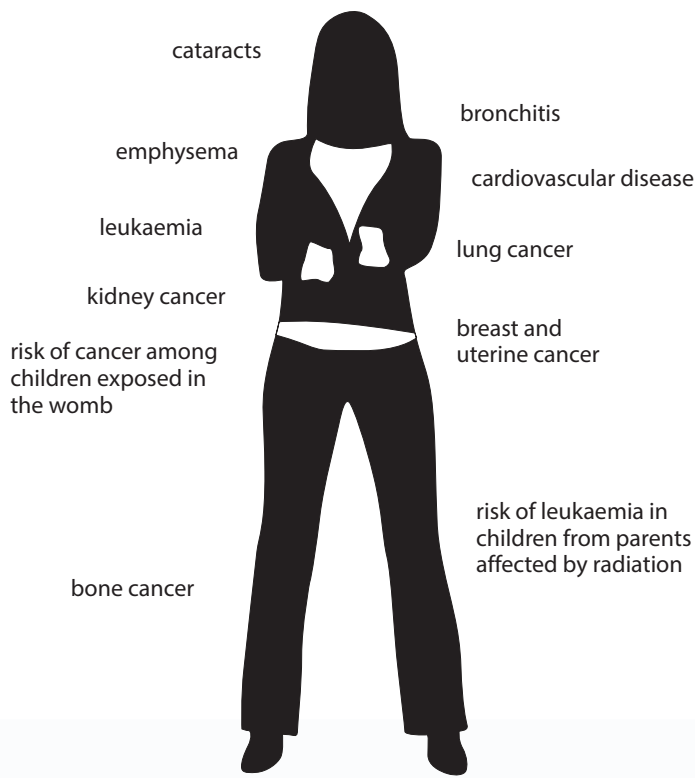
Advocates say there will be economic benefit from international waste storage but there is clearly a long-term risk to the health of the environment and local communities.

Australia is not expected to take back waste from other resources that are exported and there is no compelling reason why radioactive materials should be treated differently. There is however a strong argument to limit further transportation of these toxic and hazardous materials.

Worldwide, there is one deep underground repository for long-lived intermediate-level nuclear waste – the Waste Isolation Pilot Plant (WIPP) in the US state of New Mexico. In February 2014, a heat-generating chemical reaction ruptured one of the barrels stored underground at WIPP. This was followed by a failure of the filtration system, which was meant to ensure that radiation did not reach the outside environment. Twenty-two workers were exposed to radiation, the total cost to fix up the problems will exceed \$500 million, and the WIPP will be shut for at least four years.

SOME OF THE HEALTH RISKS FROM EXPOSURE TO RADIATION

Diagram and health information below endorsed by the Public Health Association of Australia.



Radioactive waste gives off energy that is dangerous to humans, animals and plants.



The radioactive energy can cause cancer, which may only grow many years after exposure. This increased risk persists for the rest of your life. Some kinds of radioactive waste can keep causing cancers for hundreds, thousands or even millions of years.



If waste gets into the soil, air, or water underground, it can get into our food and water. When we eat or drink, waste can enter our bodies so even communities not living near the waste site can be affected.



The energy in radioactive waste decays, meaning it decreases over time. Some radioactive waste decays very fast, in just a few minutes. Other types of waste take tens of thousands of years or more to decay.

COMMUNITY BENEFITS FROM A NATIONAL DUMP?

The government has not indicated whether contractors will be required to develop targets for using local employment and materials. Government departments have previously estimated there only would be around thirty jobs during the construction phase, followed by positions for six security guards working on rotating shifts.

A Capital Contribution Fund (CCF) will be established after the preferred dump site is selected, which the government says will benefit the local region/community. The federal government will initially input \$10 million to the fund, which will be repaid by contributions from states or territories that store waste there (excluding the host state or territory). Any contributions additional to the \$10 million will be used for local community initiatives. It is unclear how much states will be asked to pay for waste storage and disposal and how the funds accumulated by the CCF will be distributed.

A regional consultative committee that allows community members and local stakeholders to input to the process will only be formed after the Minister has declared a site.

Community voices have previously stopped national radioactive waste dumps being built in South Australia and the Northern Territory and an international dump proposed for Western Australia.

It is important that any objections to nominated sites are sent to Minister Frydenberg at the earliest possible date.

FEDERAL CONTACT DETAILS:

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Further information on the federal government's radioactive waste plan can be found at:
<http://radioactivewaste.gov.au/>

FOR MORE INFORMATION PLEASE CONTACT:

Conservation Council WA | ccwa.org.au | (08) 9420 7266

Conservation Council SA | conservationsa.org.au | (08) 8223 5155

Australian Conservation Foundation | acfonline.org.au | 1800 223 669

Friends of the Earth Australia | foe.org.au/anti-nuclear/issues/oz | 0417 318 368

Beyond Nuclear Initiative | beyondnuclearinitiative.com | 0429 900 774