

# chain reaction

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The National Magazine of Friends of the Earth Australia

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## NUCLEAR: NEVER SAFE

The unyielding spirit of Uncle Kevin Buzzacott

Is the push for nuclear power a covert  
push for nuclear weapons?

Australia's First Nations defeat nuclear  
waste dump plans again and again

AUKUS — the Front Line





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If you are considering leaving a bequest to Friends of the Earth, then Please contact our National Liaison Officers via email at [nlo@foe.org.au](mailto:nlo@foe.org.au), or visit [www.foe.org.au/bequest](http://www.foe.org.au/bequest) for more information.

## EDITOR'S NOTE

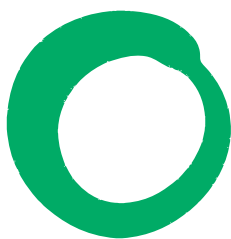
This edition of Chain Reaction is a nuclear feature. There's much to celebrate in the history of anti-nuclear activism in Australia – see Dave Sweeney's article, along with Michele Madigan's tribute to the late Uncle Kevin Buzzacott.

In recent years the federal government has been forced to abandon plans to impose a national nuclear waste dump on Barngarla Country in SA. In the Top End, uranium mining at Ranger has ceased and a clean-up is underway, and a decision has been made to incorporate the nearby Jabiluka uranium deposit into Kakadu National Park as per the wishes of the Mirarr Traditional Owners.

But the challenges never end. Currently, the threat of AUKUS nuclear-powered submarines looms large, as does the Coalition's plan to build nuclear power reactors at seven locations in five states.

At the time of writing, the election is a month or two away. The outcome will be hugely significant for the nuclear power debate, but the major parties are in agreement about AUKUS, uranium mining (three mines are currently operating, all in SA), and imposing nuclear waste dumps on unwilling communities – usually unwilling First Nations communities.

The struggles continue!



## Friends of the Earth Australia

Authorised by Cam Walker,  
Friends of the Earth Australia,  
312 Smith Street, Collingwood, VIC, 3066.

Printed by Black Rainbow, 635 Mount  
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[www.foe.org.au/chain-reaction](http://www.foe.org.au/chain-reaction)

Chain Reaction contact details  
PO Box 222, Fitzroy, Victoria, 3065.  
email: [chainreaction@foe.org.au](mailto:chainreaction@foe.org.au)  
phone: (03) 9419 8700

Chain Reaction Collective  
Jim Green, Emily Wood Trounce, Sanja Van Huet,  
Tessa Sellar, Beata Szyni

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Tessa Sellar

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# FoE AUSTRALIA NEWS

## PFAS IN DRINKING WATER UPDATES: BUNDABERG, THE BLUE MOUNTAINS AND BATHURST

17 November 2024

Three separate inquiries underway could have profound impact on how PFAS pollution is dealt with into the future. National Health and Medical Research Council, the NSW Parliament Select Committee and the Australian Senate Inquiry kicked off with a public hearing in Canberra on the 13th of November.

The following information is from the draft FoE's submission into the National Health and Medical Research Council and focuses on three areas where PFAS has been detected in drinking water supplies.

### BUNDABERG (QUEENSLAND)

Bundaberg Council revealed 192 positive PFAS detections across a range of locations including houses, bores, reservoirs and decommissioned bores between the years 2017 and 2024. The source of the contamination appears to be the Bundaberg Airport.

Dr May's drinking water reservoir about 2km north east of the airport was found to be contaminated with PFAS in late 2017. Levels of PFOS 12 times more the new proposed PFOS guideline were detected. The bore was shut down in April 2018.

Powers Street Bore, located ~3km north east of the airport, was taken offline in October 2023, after PFHxS and PFOS was recorded at 470ng/L. Mulgrave Bore was also decommissioned in May 2024.

Up to 7000 residents in Bundaberg would have been exposed to unsafe levels of PFAS in their drinking water.

### BLUE MOUNTAINS (NEW SOUTH WALES)

In June 2024, the Sydney Morning Herald published articles on PFAS contamination in water supplies, eventually pressured the NSW

Government to undertake PFAS testing in Sydney Water catchments. Testing revealed that the highest PFAS levels appear to be in dams supplying drinking water to communities in Katoomba and Blackheath in the Blue Mountains. Research is now pointing to the contamination being likely associated with a truck accident near Medlow Spring where Fire Fighting Foam was used.

The use of fire fighting foam in bushfires in the past needs further investigation.

### BATHURST (NEW SOUTH WALES)

The city of Bathurst has been monitoring for PFAS chemicals since 2017. There are two sampling locations, one at the water filtration plant and the other upstream at Montavella Road about 3km upstream on the Macquarie River. The average PFOS detection level at Montavella is about 25% higher than the WFP.

The spike occurred in August 2020 when a detection of 6:2 FTS at

345ng/L occurred. Drinking water for Bathurst comes from Ben Chifley Dam. Water is released from the dam which then flows into Campbells River and then into the Macquarie River. Ben Chifley Dam has not been monitored for PFAS.

Most of the catchment upstream of Bathurst is farming land, and if this proves to be the source of the pollution, what ramifications does this have for other agricultural regions of Australia?

For more information:

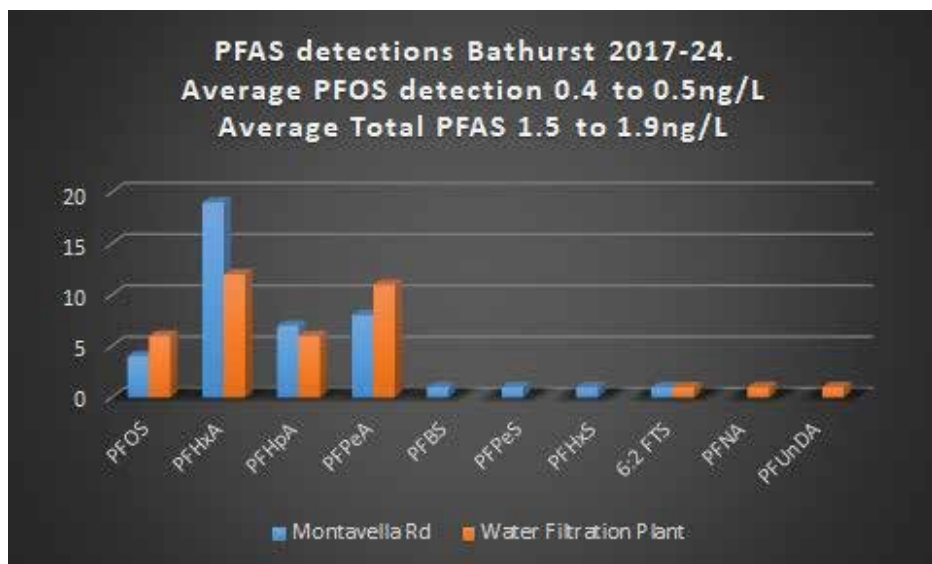
[anthony.amis@foe.org.au](mailto:anthony.amis@foe.org.au)

News source: [PFAS in drinking water updates \(Nov 24\): Bundaberg, the Blue Mountains and Bathurst - Friends of the Earth Australia](#)

More on this topic

[Are Biosolids and Compost a Major Source of PFAS Pollution in the Belabula River - Friends of the Earth Australia](#)

[Is Rainfall a Source of PFAS Chemicals in Sydney Drinking Water Supplies? - Friends of the Earth Australia](#)







## UN PLASTICS TREATY: WORLD LEADERS URGED BY ACTIVISTS TO “END PLASTIC” THROUGH A 500-PERSON HUMAN SIGN

25th November 2024

As UN negotiations for a global Plastics Treaty start in Busan, South Korea, over 500 Friends of the Earth International and Friends of the Earth South Korea (KFEM) activists sent a bold message to governments with their bodies, making a human sign spelling out the words “End Plastic”. The action took place on a beach near where over 175 governments are meeting this week to finalise a new treaty to end plastic pollution.

*“Today’s demonstration is part of a growing global movement, following other actions by Friends of the Earth groups worldwide. The Australian government as a member of the High Ambition Coalition to End Plastic Pollution has a crucial role to play in finalising a new treaty in Busan. Australia must continue to stand strong on a global target to reduce plastic production and support finance to Global South countries to do the same.”*

Media contact

For more information: Sam Cossar-Gilbert email: [sam.cossargilbert@foe.org.au](mailto:sam.cossargilbert@foe.org.au) phone: +61413 496 570

News source [UN plastics treaty negotiations start - Friends of the Earth Australia](#)

More on this topic

[UN Plastics Treaty negotiations extended: Insufficient progress, but majority of countries back ambitious action | Voices from FoE Asia Pacific](#)

[UN Plastics Treaty: World leaders urged by activists to “End Plastic” through a 500-person human sign | Voices from FoE Asia Pacific](#)

[Human sign in Malaysia sends powerful message to world leaders for a strong plastics treaty | Voices from FoE Asia Pacific](#)



## LA FIRES A WAKE UP CALL FOR AUSTRALIA

9 January 2025

During (Australia’s) Black Summer, more than 1,000 people came from North America to assist in firefighting efforts. Australia recently sent multiple teams to assist with the fires in North America. This sharing of resources, including aircraft, firefighters and specialists, is how we fight fires in the 21st century” said Friends of the Earth campaigns co-ordinator Cam Walker. “And the fact that fires are raging in mid winter in the USA highlights that the world has entered a new phase – the era of the pyrocene – and that our old ways of fighting fires needs to change.”

Normally Australia leases up to six Large Air Tankers (LATs) which are each allocated to a specific state or territory, but which are shared around the country according to greatest need. While we need up to 7 LATs in a bad fire season, we only own one (which is owned by the NSW Rural Fire Service) and we now lease one year round.

“As fire seasons extend in both hemispheres, we face the risk of being unable to secure leases for LATs in coming years”.

There is a clear link between the current fires around LA and climate change.

The commission also noted that “extreme weather has already become more frequent and intense because

of climate change (and that) further global warming over the next 20 to 30 years is inevitable”.

“In light of all the available science about longer and more intense fire seasons in both hemispheres and the increased difficulty of securing LATs on lease from North America, the federal government must commit to establishing an Australian owned fleet of LATs before the 2025/26 budget”.

**A national remote area firefighting team.** As fire threatens World Heritage Areas and national parks across the country, it is time to establish a national remote area firefighting team, which would be funded by the federal government and tasked with supporting existing crews in the states and territories.

Long fire seasons stretch local resources, and sometimes remote areas need to be abandoned in order to focus on defending human assets. Having an additional, mobile national team that could be deployed quickly to areas of greatest need would help us protect the wonderful legacy of national parks and World Heritage Areas across the country.

News Source: [LA fires a wake up call for Australia - Friends of the Earth Australia](#)

# FoE INTERNATIONAL

## THE CEASEFIRE IS NOT THE END – IT IS THE BEGINNING

31st January 2025

Friends of the Earth International, together with PENGON/Friends of Earth Palestine, would like to extend our sincere appreciation and gratitude to all our member groups, allies and supporters, for standing with us in defence of Palestinian's human rights and for fighting with us for justice in Palestine. With this emerging ceasefire agreement, a crucial first step has been taken toward bringing an end to the war, the loss of lives, and the widespread suffering. This will provide much needed relief to Palestinian people in Gaza who have endured unimaginable hardships and destruction throughout this war.

We extend our heartfelt condolences to the countless families who have lost loved ones and to those who have been displaced or injured. The toll of this war has been profound, affecting every aspect of life, including access to essential services, education, and basic human dignity.

This moment of respite must be a time for reflection and continued solidarity, but also urgent action. This is a time to rebuild and to save what remains of Gaza. To achieve this we emphasize the need for a sustained ceasefire that ensures security and justice for the people in the Gaza Strip.

To begin the shift towards real justice FoE Europe demands the following:

We call on all governments to:

- financially support the reconstruction of Gaza based on the sovereignty of the Palestinian people
- cease the export of all arms, military assistance and spare parts to Israel
- uphold their obligations under the ICC as a first step towards achieving justice and accountability.



## GREEN AMBITION BIGGEST LOSER IN DEREGULATION GAME

26 February 2025

EU decisionmakers prioritise bolstering industries over supporting and protecting people and climate

New legislation announced today by the European Commission is set to destroy due diligence and environmental rules whilst bolstering polluting industries through unconditional subsidy packages, Friends of the Earth Europe said today.

The EU Commission unveiled a package of legislative measures, with an emphasis on deregulation and unconditional subsidies. The proposals

signify a policy U-turn by crushing the EU's Green deal package.

Rather than ensuring that “every person, community, and business can benefit from the clean transition” and human rights are protected from corporate harm, the EU seems to prioritise subsidising industries that choose pay-outs to their shareholders over green investments.

News source [Green ambition biggest loser in deregulation game – Friends of the Earth Europe](#)

We call on the international community to take solid, tangible actions to support the Palestinian people by:

- pressuring governments to implement the measures above
- pressuring companies profiting from the occupation to halt their activities, such as Mekorot
- sharing Palestinian stories, their struggles, and their demands for freedom and the end of the Occupation.

News source [The ceasefire is not the end — it is the beginning – Friends of the Earth Europe](#)



# The unyielding spirit of Uncle Kevin Buzzacott

Michele Madigan

After the November 2023 passing of a great Australian environmental warrior, Uncle Kevin Buzzacott, commemorative gatherings celebrated his memory at Lake Eyre South and in Adelaide, Melbourne and elsewhere.

Uncle Kevin was indeed a warrior – a man of enormous courage, extraordinary imagination and strategic thinking. He was a person totally committed in love to the well-being of country and waters, for the present and especially for the future generations.

An Arabunna man, Uncle Kevin devoted himself to the protection of Lake Eyre and Wibma Mulka, the Mound Springs, and the whole of that delicate, glorious country of north eastern South Australia with its Great Artesian Basin's ancient waters threatened by the succession of powerful mining companies operating Roxby's Olympic Dam. The original 'joint venturers' were Western Mining Co (WMC) and British Petroleum (BP); then WMC; then from 2005, BHP/Billiton; and from 2018, BHP.

Born on Finnis Springs Station on October 9, 1946, Uncle Kevin was always proud to declare that he "was born with the Old People, the old way. I was not born in a hospital. We lived in humpies then."

After schooling years in Maree, he worked on the railways, and then did droving and station work until 1982 when, as he declared, "I took up the Aboriginal fight for freedom and peace." He worked in various drug and alcohol rehabilitation facilities and in Aboriginal education at Alice Springs' Aboriginal-run Yipirinya School. He then moved on to full time volunteer environmental protection and care for country including calling his own people back 'home'.

## KUNGKAS

In the 1990s, I lived in Coober Pedy where the senior Aboriginal Women – Kungkaskas – intent on preserving and reviving the traditional women's culture, formed themselves into Kupa Piti Kungka Tjuta. From 1998 on, when the grave threat of the federal government's national nuclear waste dump emerged, they became intent on the task of preserving the country of their beloved Seven Sisters' creation, from the threat.

At their first public meeting – in Melbourne at the 'Global Survival and Indigenous Rights conference', as their honorary 'paper worker', I was instructed to film Kevin Buzzacott's address. They assured me it would be worth it.

During that spellbinding session, I became convinced I was listening to one of the nation's great orators. And with that perfect timing of one, he broke off at one point to call up those desert women, the Kungkaskas, to share the outdoor stage with him, all uniting in protection of country. Uncle Kevin's own authority was evident as an Arabunna man intimate with knowledge of, and the passion for, his country, in stark contrast to the interlopers.

His final cry, so often repeated before and since, was full of belief, hope and encouragement, "This country is alive – it's too magical ... But if we move, that Old Country power will come with us."

## ARABUNNA GOING HOME CAMP

The next year, 1999, under Uncle Kevin's leadership, many young environmentalists joined the venture he named the 'Arabunna Going Home Camp' set up on the shores of Lake Eyre.







Kevin (centre) in Alice Springs in 2014.

For these ‘Keepers of Lake Eyre’ this was arduous, patient campaigning as Uncle Kevin’s presence, courage, wisdom and cultural knowledge, love of the land and extraordinary communication skills continued to mutually sustain the more youthful energy, commitment and dedication of his companions.

Uncle Kevin called twice for the Kungkaskas to travel the southern part of the Oodnadatta Track to become part of the camp. Once we witnessed a mystical session when, as part of his teaching, he ‘became’ the Lake.

It was a physical suffering to him to witness the profligate exploitation of the extraordinary ancient waters of the Great Artesian Basin, including its damaging effect on the Mound Springs. With the blessing from successive SA governments, BHP’s copper/uranium mine at Olympic Dam continues to extract around 35 million litres of water a day.

## GENOCIDE CORNER

When, in 2000, Western Mining eventually sacked the Camp, rather than simply lament this cowardly action, Uncle Kevin reciprocated by strategically switching the Camp and its sacred fire to a site which would be notably more in the public view. Named ‘Genocide Corner’ in the Adelaide CBD, the new site was erected at no less an address than next to the entrance of Government House. With the added advantage of being directly across from Parliament House, Genocide Corner Camp created a situation which caused acute embarrassment to some including the Adelaide City Council, and of course, righteous indignation to many.

Predictably, News Ltd indignantly devoted a front page

with its banner headline ‘Not in Our Front Yard’ and many other aggrieved reports aimed at those who would tarnish both North Terrace respectability and the reputation of one of Australia’s largest mining companies.

## PEACE WALK

Genocide Corner had to be abandoned for various reasons including because it was time to walk – yes, walk! – from Lake Eyre to Sydney in time to take advantage of the national and international media present at the 2000 Olympics.

One aim of the Peace Walk was to present the case for Australia’s breaching of basic environment laws. The Kungkaskas and I were part of the group to see off the 50-strong entourage to literally carry the fire ‘for peace and justice.’

As Uncle Kevin explained in an interview with his long-time close colleague Tanengkald lawyer, activist and academic Irene Watson: “The most important thing is to walk that old country; ...walk in the footsteps of the old ancestors and feel the power of that old country and old spirit.”

Astoundingly, three months later the entourage had arrived after spectacular connections with many Aboriginal as well as non-Aboriginal supporters in country towns along the route.

Shortly afterwards came another Uncle Kevin invitation to the Kungkaskas: ‘Come to Sydney yourselves to benefit from the international media.’ Despite the many laws having been swiftly passed about what seemed to be almost infinite ways one could be arrested if protesting, this is what we did.

As Emily Munyungka Austin later proudly declared, ‘We were brave women!’ We arrived in Sydney, of course



by train, to find an enormous tent already set up and waiting at the Botany Bay site Uncle Kevin had named 'Captain Cook's Foot.'

Some international media were interested, travelling out to the site. They, especially the UK media, were astounded to learn they were in the company of nuclear survivors (as many of the Kungkas were) of the 1950s-60s British nuclear tests on their country in South Australia. Uncle Kevin's own efforts, ignored by Australian media, featured on the front page of the *Chicago Tribune*.

## CLEANSING OF THE HARBOUR

In surely one of the most creative in all Kevin Buzzacott's lifetime of creative protests, at 5am one morning, the Kungkas and I were collected from Camp to participate in the 'Cleansing of the Harbour' expedition. Already on the foredeck of a friend's privately owned ferry, Uncle Kevin and Auntie Isobel Coe were surrounded by small eucalyptus branches, fuel for the small ceremonial fire. The ceremonial cleansing smoke was sent out as we cruised over the magnificent Harbour – a harbour of course completely taken over by white interests.

Having reached the Heads, we turned back with a brief stopover at maybe Rose Bay which gave waiting regular ferry passengers an opportunity to loudly voice opinions for (or against) the wisdom (or audacity) of Aboriginal people to be restoring Harbour wellbeing.

The clear run back to base, was, we all noticed at different times, accompanied progressively by two state tugs and then no less than three state helicopters. 'Looks like jail for us!' warned Diane, the youngest Kungka. But our ferry operator slid back home into dock with consummate skill – just in time.

Of course, even this brilliant expedition pales in comparison to Uncle Kevin's key role in participating in the much later West Papuan Freedom Flotilla of August 2013.

In December 2004, his campaign became more visible internationally with the Peace Walk from Roxby Downs to Hiroshima. The eventual Indigenous International Gathering in Japan, Uncle Kevin reported, "was a great help" to his own spirit. In later years, believing (correctly) that it was Australia's uranium that fuelled the Fukushima reactor, Uncle Kevin formally apologised to the Japanese for his country's role in the Fukushima catastrophe.

## RECOGNITION

Kevin Buzzacott's work was first officially recognised, overseas, with the Nuclear-Free Futures award in Ireland in 2001. Five years later, he was recognised in his own country, receiving the 2006 Conservation Council of SA award and in 2007, the Australian Conservation Foundation's Peter Rawlinson award.

Kevin Buzzacott's brave efforts over the years included actions to effect long-term change for his country, peoples, culture and cultural symbols in court against government and/or mining company actions, past, present or proposed. Appearing variously in the Magistrates court, the Federal



Court, right up to the High Court of Australia, in this difficult dimension of his work he found support within the legal profession and in the Environmental Defenders Office.

Worth noting is a reference submitted at one time in his support, commending his expansive influence on young people: 'They have learned about country, about the sacredness of the land; about Aboriginal protocol and respect including respecting the Elders; about living skills; about communication; about bush skills. Most of all they have learned about integrity, commitment and self-control. It's been a marvellous thing for so many young people – both Aboriginal and non-Aboriginal to have a personal mentor in Kevin Buzzacott.'

As news of his environmental knowledge, wisdom and powerful strategies grew, over the years Uncle Kevin was called and responded to pleas for his presence Australia wide. To cite just two, his has been a decades-long commitment to the Aboriginal Embassy in Canberra with the sacred fire. In 2006 began his active response to the call of the Melbourne Sovereignty Camp.

Integral to his commitment, Uncle Kevin was a founding member and long-term President of ANFA, the Australian Nuclear-Free Alliance. Begun in 1997, ANFA is a network of Traditional Owners and others who share a common concern about the impacts of nuclear projects, supporting each other's work to end nuclear threats.

For decades, Uncle Kevin would make the effort whenever possible, to address so many different groups of any size, including on country during the regular Friends of the Earth 'Radioactive Exposure Tours'.

In his later years, his appearance at an ANFA gathering, a rally or any type of gathering was always a bonus. In the big events like the Camp, the Walk, the overseas trips, his health crises, as well as in the events of more everyday life, Uncle Kevin appreciated the unwavering support of his long-time partner, Margret Gilchrist. Active right up to his passing, never giving up, Uncle Kevin was on country at Alberrie Creek and Maree for many weeks in late 2023.

As Irene Watson said, "Kevin Buzzacott will always be known as one of Australia's greatest leaders who led from the margins a cause he brought into centre stage of the Australian community."

*Michele Madigan is a Sister of St Joseph who has spent over 40 years working with Aboriginal people in remote areas of SA, in Adelaide and in country SA.*

*This article was originally published in Eureka Street.*

# Australia's nuclear-free movement: a history of radioactive resistance

Dave Sweeney

*With nuclear issues increasing dominating the headlines and airwaves ahead of the federal election Dave Sweeney highlights the importance of reflecting and refreshing the struggles and successes of Australia's diverse nuclear free movement.*

Without the sustained contest and common-sense provided by Australia's nuclear free community our country would look very different. We know it is an ancient landscape, but if it wasn't for sustained inter-generational effort it could also be an atomic one.

In the country that is home to around 35% of the world's uranium – the basic fuel for both nuclear power and weapons – it is a tribute to resistance that the landscape is not littered with legacy and operating uranium mines.

In one of the most urbanised nations on Earth it is tribute to resistance that we are not dependant on nuclear reactors for hot showers and cool drinks.

And given our large tracts of sparsely populated land it is a tribute to resistance that we have avoided the full burden of multiple sacrifice zones and a landscape of nuclear processing, waste and weapons sites.

Australia's nuclear-free movement has ebbed and flowed in profile, effectiveness and focus but it has been a multi-decade constant in civil society advocacy and progressive politics.

And it has made a real difference.

Our land does contain failed and failing uranium mines, warehoused radioactive waste and the continuing contamination of nuclear test sites but the scale is far less than the atomic agenda that nuclear proponents have pushed and promoted for decades – and continue to loudly do so today.

We have also dodged the worst bullets – nuclear weapons, along with commercial nuclear power reactors and hosting high-level international radioactive waste.

This largely fortunate position is not because of luck or political largesse. It is a result of resistance, story, solidarity and struggle. Generations of action and ambition has helped keep the nuclear genie well bottled, often against the odds and always on an uneven and unbalanced playing field.

Powerful political, corporate and commentariat interests have joined forces with international actors and influences to prosecute a vision of an Australia that is fully integrated into a civil and military nuclear platform. And they have not succeeded.

## URANIUM MINING AND EXPORT

The nuclear story starts with uranium – the radioactive rock that fuels the fire. Described alternatively as a Midas mineral or a metal of menace, uranium is plentiful, and mining has been and remains a clash point.

The Australian resources sector has a long list of uranium enthusiasts who have spoken of Australia as the 'Saudi Arabia of nuclear' and boosted of a sector akin to 'iron ore on steroids'.

However, the industry has never come close to delivering on the dreams of promoters.

This can be seen in the hard metrics of tonnage, jobs and dollars and the vitriol directed to anti-nuclear perspectives.

Industry advocates have enjoyed high levels of inside-track political preferencing and administrative fast-tracking with 'streamlined' approvals processes, significant subsidies and rebates and exemptions from legal and reporting requirements. But even when a beneficiary of this disproportionate political and media support, the uranium sector is flat-lining.

The modern era of uranium mining is well into its Autumn. Australia's longest running uranium mine – Rio Tinto / ERA's controversial Ranger mine in Kakadu – has ceased commercial operations. Now attention has moved from extraction to remediation and the site is the focus of the most complex and costly mine rehabilitation in Australia's history, with the price tag currently hovering north of \$A2 billion.

The heavy lifter in the uranium sector is BHP and its massive Olympic Dam copper-uranium-gold mine in northern South Australia. The world's largest miner is also one of the world's largest industrial users of underground water, with a license to consume over 40 million litres per day of Great Artesian Basin water in the driest state of the driest continent.

Increasingly aware of sustained Aboriginal and growing community concern over its water use, BHP is exploring new desalination supply options. While the company continues uranium production it is not prioritising the mineral, instead preferencing mine expansion options that promote copper.

Australia's newest uranium entrant brings with it some of the worst of the sector. Deep Yellow is a junior miner with a limited capacity that likes to make big claims about its Mulga



The first meeting of the Australian Nuclear Free Alliance, held in Alice Springs in 1997. Twenty-eight years later, ANFA is still going strong. [anfa.org.au](http://anfa.org.au)



Rock project east of Kalgoorlie. Fast-tracked by the former Barnett state government, this is the only project that could advance to commercial production in Western Australia.

The Deep Yellow management team is a cause for special concern. CEO John Borshoff, who described Fukushima as a 'sideshow' and has bemoaned the Australian community's 'over-sophistication' around uranium issues has a history of over-promise and under-performance at uranium operations in Africa, while Chairman Chris Salisbury was the head of Rio Tinto Iron Ore at the time of the Juukan Gorge destruction.

The federal Coalition's nuclear push and global market impacts from Russia's invasion of Ukraine have seen a spike in uranium promotion and a conga-line of hopefuls and wanna-be's spruiking the sector. Some of the threats are real, most are spin and all are contested.

All of Australia's uranium is exported, increasingly to risky regions with low transparency and governance, including the UAE, Ukraine and India and to nuclear weapons states that are in breach of their international treaty obligations.

Australian uranium directly fuelled Fukushima and was fuelling the reactor complex at the time of the 2011 meltdowns. Japan is now routinely dumping contaminated Fukushima wastewater directly to the Pacific. What began as radioactive rocks in the back of big yellow trucks in Australia is now a liquid threat to the ecology and culture of the Pacific.

## RADIOACTIVE WASTE

All uranium becomes radioactive waste and opposing politically driven, short-term waste dump schemes has been a successful staple of Australian radioactive resistance for decades.

Radioactive waste management is a growing and

unresolved global challenge. Despite over seven decades of assurances there remains no assured way to isolate these wastes from people or planet for the extensive time periods that they remain a hazard.

For nuclear utility executives sitting in Europe, Tokyo, Seoul and elsewhere, Australia appears a good waste disposal option. A big country with a politically stable and small population, a toe already in the cooling water via uranium exports, dry and old ground and rock and, best of all, a long way away.

There have been several serious pushes to locate international high-level radioactive waste in Australia. A consortium of mainly European radioactive waste makers and managers called Pangea Resources was sniffing around WA's Officer and Savory basin regions in the 1990s before environmentalists blew their cover and scuttled the plan. Last decade former SA Premier Jay Weatherill flirted with the prospect of hosting high-level international waste and held a Royal Commission to try and advance the plan.

Both these pushes failed, in large part due to sustained community opposition that was spearheaded by First Nation's concerns and voices, including through the Australian Nuclear Free Alliance. These successful rebuffs were hard won and are a credit to those who acted but, like radioactive waste itself, the idea of an eternal nuclear waste sacrifice zone in Australia remains undead.

Closer to home the federal government is having a pause from three decades of failed Canberra imposition over a national radioactive waste facility after its most recent siting debacle and defeat at Kimba in South Australia where the Barngarla community and regional grain growers successfully campaigned to end a deeply flawed plan.

In the 30 years since this remote/regional storage and dump approach was unveiled, it has been the only one that

has been prosecuted by successive federal governments. Radioactive waste management has become a calcified policy zone characterised by top-down announcements and bottom-up resistance.

This approach has seen multiple fights at multiple sites, mainly in northern SA and the NT. The Kupa Piti Kungka Tjuta and community resistance in Alice Springs, Katherine and at Muckaty near Tennant Creek are all deserving of greater public recognition and acknowledgement. These David v Goliath battles have shown the power of sustained community collaboration and campaigning.

But years of resistance may possibly see a circuit breaker and a changed approach to waste management with a newfound acceptance that intermediate level waste from ANSTO's Lucas Heights reactor can and will remain in extended on-site storage pending a future decision. The first step in doing something right is to stop doing it wrong and this is a positive start.

## NUCLEAR POWER

Against the backdrop of Australia's recent years of fire, flood and climate chickens roosting there has been a massive push for domestic nuclear power. The federal Coalition's mantra of unspecified reactors at seven sites around the country has emerged as a key 2025 federal election issue.

They are seeking the removal of prudent prohibitions on domestic nuclear power that were introduced by the Howard government and attempting to harness the cash and connections created by the AUKUS nuclear submarine deal to prise open the domestic door. This policy agenda has been steadily advanced since mid-last decade and is explicitly laid out in a 2020 publication – *An Australian nuclear industry – starting with submarines?*

The pro-nuclear push was originally based around small modular reactors (SMRs) rather than the high-cost, high-risk reactor types that exist and generate commercial electricity in the world today.

The fundamental flaw in this approach was that SMRs are not a commercial or deployed technology and so in a swift pivot the Coalition are now talking up large-scale reactors, with the vague option of future SMR's. This is politics on the fly, not a credible national energy policy.

The Coalition nuclear plan is not a misguided but good faith attempt to address the pressing challenge of securing a low-carbon energy future as our nation exits coal. Probably the most honest Coalition analysis has come from Queensland National Matt Canavan, "nuclear is not going to cut it ... we're as guilty of this too, we're not serious ... we're latching on to it as a silver bullet, as a panacea because it fixes a political issue for us."

For the Coalition, embracing nuclear power provides a way to link techno-enthusiast Liberals with renewable belittling Nationals – all under a 'business pretty much as usual' policy umbrella. If successful the Coalition plan risks delaying and derailing the renewable transition, putting a handbrake on effective climate action, extending coal and cementing gas as a cornerstone of Australia's energy future.

We can't afford to waste more precious time on false or ineffective climate responses.

And we really do not have time to waste. The Doomsday Clock – a measure of humanity's proximity to extinction is now set at 89 seconds to midnight – the closest it has ever been.

The combined threats of unchecked climate change and nuclear war – one which erodes our chances every day and one which could end them in a day – require urgent action. Nuclear power is no solution to either threat, instead it escalates both.

## NUCLEAR WEAPONS

Along with keeping most of Australia's uranium in the ground, halting irresponsible waste dumping and stopping reactors, one of the powerful outcomes of Australia's nuclear-free movement has been to create a pathway to contest, constrain and cancel nuclear weapons.

The International Campaign to Abolish Nuclear Weapons (ICAN) was launched in Melbourne in 2007 with a focus to make nuclear weapons illegal as a first step to making their possession or threat untenable.

In September 2017 the UN adopted the Treaty for the Prohibition of Nuclear Weapons (TPNW) and later that year ICAN was awarded the Nobel Peace Prize for its work "to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons" and "ground-breaking efforts to achieve a treaty-based prohibition of such weapons".

The TPNW formally entered into force in January 2021 and nuclear weapons are now illegal under international humanitarian law. Federal Labor in Opposition committed to advance signature and ratification. In government they have been swift to embrace AUKUS but painfully slow to advance the TPNW.

As Australia moves towards nuclear powered submarines and the deployment of USAF B52's at RAAF Tindal in the NT, the reality and the optics of the TPNW are increasingly important.

Signing the Treaty would send a signal from the Baltimore to Birdsville and on to Beijing that Australia does not harbour nuclear weapons ambitions.

The TPNW also has positive obligations that would help address continuing and long overdue nuclear test legacies, environmental remediation and cultural and human health concerns in First Nation Australia and throughout the Pacific.

Australia's nuclear-free movement is comprised of many strands, stories and struggles – none of which, alone, are sufficient. But braided collectively these efforts form ropes of resistance and strings of solidarity that continue to tie down the nuclear giant and provide us with the space and opportunity to construct a different future.

And in our increasingly climate pressured, uncertain and militarised world this work has never been more urgent or important.

Dave Sweeney is the Nuclear-Free Campaigner with the Australian Conservation Foundation. [acf.org.au/nuclear-free](http://acf.org.au/nuclear-free)



# The nuclear fuel cycle

## — a brief explanation

Dr Jim Green

The nuclear fuel cycle is the series of processes undertaken to produce electricity from uranium in nuclear power reactors.

**Uranium mining** is the starting point. Uranium is the fuel for all reactors except a handful of experimental thorium reactors. Uranium is also the feedstock for all nuclear weapons (which use highly-enriched uranium, or plutonium-239 produced by irradiating uranium-238, as their explosive material).

Currently there are three uranium mines operating in Australia, all of them in SA – the underground Olympic Dam mine and the in-situ leach (ISL) Beverley and Honeymoon mines. Australia's involvement in the nuclear fuel cycle is limited to uranium mining and milling. In a mill, uranium is extracted from the crushed and ground-up ore by leaching, using either a strong acid or a strong alkaline solution to dissolve the uranium.

Underground and open-cut uranium mines generate vast amounts of radioactive tailings waste, while ISL mines involve circulating liquid through a porous orebody to dissolve the uranium and bring it to the surface. The liquid radioactive waste from ISL mines is dumped in groundwater.

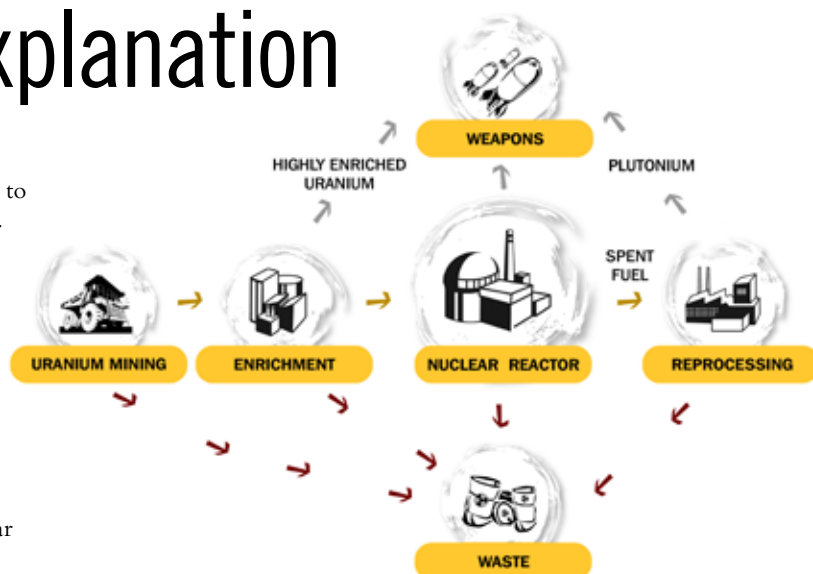
**Conversion** is the next stage of the cycle, converting uranium ore concentrate into uranyl nitrate and then into uranium dioxide, which can be used as the fuel for those types of reactors that do not require enriched uranium. Since most reactors are fuelled with enriched uranium, most uranium dioxide is converted into gaseous uranium hexafluoride in preparation for enrichment.

**Enrichment** is the next stage. This involves increasing the ratio of uranium-235 from 0.7% to 3–5%, typically using gas centrifuges or to a lesser extent gaseous diffusion. Enrichment is considered a 'sensitive' nuclear technology because it provides a direct pathway to fissile (explosive) material for nuclear weapons, namely highly-enriched uranium. Enriched uranium hexafluoride is then deconverted to produce enriched uranium oxide.

Depleted uranium (DU) is a by-product of enrichment and contains a depleted concentration of uranium-235 and a higher concentration of the uranium-238 isotope. DU has some civil and military uses and some is stored as waste.

**Fabrication of fuel elements** is the next stage. Reactor fuel is generally in the form of ceramic pellets which are then encased in metal tubes to form fuel rods, which are arranged into a fuel assembly.

**Power generation** is the next stage. Inside a nuclear reactor the nuclei of uranium-235 atoms split (fission) and,



in the process, release energy. This energy is used to heat water and turn it into steam. The steam is used to drive a turbine connected to a generator which produces electricity. Some of the uranium-238 in the fuel is turned into plutonium in the reactor core. The main plutonium isotope is also fissile and it yields about one third of the energy in a typical nuclear reactor.

**The back end of the nuclear fuel cycle** involves storing, processing or disposing of irradiated nuclear fuel (euphemistically known as 'spent' fuel) after it is removed from reactors. Typically, uranium fuel rods are used for 1–5 years before being removed and replaced.

Most irradiated nuclear fuel – which is classed as high-level nuclear waste – is being stored pending deep geological disposal. No country has an operating deep geological repository for high-level nuclear waste.

About one-third of irradiated nuclear fuel has been 'reprocessed'. This typically involves dissolving irradiated fuel in nitric acid and separating it into three streams: uranium in the form of uranyl nitrate (95% uranium-238 and 1% uranium-235), high-level nuclear waste (primarily fission products, also transuranics/actinides) (3%), and plutonium in the form of plutonium nitrate (1%).

Theoretically, the separated uranium can be converted into reactor fuel, and plutonium can be used in mixed uranium-plutonium reactor fuel ('MOX') or in fast neutron 'breeder' reactors. But most separated uranium and plutonium is stored (and thus the term nuclear fuel 'cycle' is a misnomer).

Reprocessing has been described as "environmentally dirty" by former World Nuclear Association executive Steve Kidd. It is also a 'sensitive' nuclear technology due to the separation of weapons-useable plutonium.

# Exposing Pro-Nuclear Disinformation in Australia

GetUp!

*In November 2024, GetUp published a detailed report titled 'Exposing Pro-Nuclear Disinformation in Australia'. The introduction to the report is reproduced below and the full report is online at [getup.org.au/pro-nuclear-disinformation-in-australia](https://getup.org.au/pro-nuclear-disinformation-in-australia)*

Proposals for nuclear energy have seen an extraordinary transformation in Australia. Evolving from a politically-suicidal policy proposal just a few years ago, polls now indicate a weak majority support for exploring its adoption, and pundits and senior politicians are dubbing the 2025 election to be a 'referendum on nuclear.'

It is a rare occurrence for the overton window to shift so dramatically without some catalytic crisis or disaster. It is seemingly the work of a determined propaganda ecosystem that has taken up nuclear energy as their latest strategy to delay the phase-out of fossil fuels and undercut the update of renewables.

Through the 2023 Voice referendum, more people in Australia were exposed to the power and influence that a well-resourced disinformation and astroturfing ecosystem can inflict on public sentiment. Democratic institutions like Australia's weak accountability of news media, independent government agencies, and political and grassroots campaigns, failed to grapple with the intensity and array of tactics.

This emboldened disinformation ecosystem is now deploying their resources and developed tactics towards a campaign for nuclear energy in Australia, to support a Coalition win at the 2025 election. The current campaign for nuclear energy in Australia has the clear goal of electing the Coalition – as to date, there has been no credible or detailed plan provided that would deliver a realistic energy transition.

For fossil fuel and wealthy elite interests (of which the Coalition is the political vehicle), the strategy seemingly has two parts:

1. Proposing nuclear power allows them to present a solutions-based response to climate change, and divert attention from their pro-coal and gas positions. This allows them to run positive campaigning on climate, which is crucial in key urban seats lost to independents in 2022, as well as regional electorates grappling with the realities of extreme weather events and the ramp up in renewables development. Nuclear energy provides a means to continue harnessing negative sentiment

towards renewables, which they have cultivated for years, but simultaneously insist that they do have a real commitment to emissions reduction.

2. Nuclear energy aims to wedge the environmental movement, climate independents, the Labor Party and Greens, by stoking division and bogging them down in technical explanations of why nuclear is neither desirable nor viable in Australia. Many younger voters were not present for earlier, successful campaigns against nuclear and uranium mining in Australia in the 1980s and 90s. Building on the success of their divisive 2023 referendum tactics, a campaign for nuclear power can create confusion and division within the Coalition's electoral opponents.

The added benefit for fossil fuel interests is that the campaign creates greater uncertainty for renewables investment. For the nuclear industry, who had little hope of progress within Australia, there is nothing to lose by backing-in the campaign and benefiting from the billions in government contracts and consulting that could eventuate, whether reactors are ever built or not.

To support GetUp and its allies to outmanoeuvre the nuclear campaign strategy, this report provides a landscape of the campaign ecosystem. Between July and September 2024 we explored, mapped and investigated the actors coordinating in their advocacy for nuclear energy in Australia. The research set out to understand those responsible and their relationships, as well as the tactics and narratives being used to mainstream nuclear power.

Explored in turn through the sections of the report, we sought to understand:

1. The make-up of the pro-nuclear propaganda ecosystem – who is involved and what are their resources;
2. The key messages they are deploying to strengthen pro-nuclear sentiment and the circulation of pro-nuclear narratives; and finally,
3. The trajectory of this campaign – where it appears to be heading.

The analysis has uncovered strong evidence of a likely-coordinated and sophisticated ecosystem of actors, think tanks, not-for-profits and political operatives generating and targeting disinformation narratives at specific audiences in Australia.



# PRO-NUCLEAR DISINFORMATION IS RIFE IN AUSTRALIA



*GetUp's new report reveals all you need to know:*

## 1. WHO:

The nuclear energy agenda is driven by a **complex web of actors poised to gain from nuclear**, including the Coalition, NewsCorp, Advance Australia, and the Minerals Council.

## 2. HOW:

**Using disinformation tactics to mislead** the public, targeting women, youth, and regional communities with astroturfing - **fake “grassroots” campaigns to confuse us and insinuate public support.**

## 3. WHY:

**Nuclear energy is a dangerous distraction from renewables.** They're trying to stay relevant, delay climate action, keep us dependent on coal and gas, and protect their profits.

Source: Pro-Nuclear Disinformation in Australia, GetUp, 10 December 2024.



# Is the push for nuclear power a covert push for nuclear weapons?

Mark Diesendorf and Richard Broinowski

A recent push for nuclear power in Australia has been promoted by the usual public advocates and amplified by the Murdoch press.

The arguments are predictable both in their optimism and inaccuracy: nuclear power reactors are claimed to be safe and cheaper than electricity generation from wind and sun; new generation mini-reactors are claimed to be even cheaper and safer and can be adapted to power a factory or a town.

Australia has uranium, and can easily acquire the technology. Advocates for nuclear power are calling for ‘informed’ public debate to quell public fear about nuclear power.

In reality, informed public debate has been going on for some time. The latest iteration was the South Australian Royal Commission of 2015–16, which found that “nuclear power would not be commercially viable to supply baseload electricity to the South Australian subregion of the NEM from 2030 (being the earliest date for its possible introduction).”

But advocates are not deterred, claiming, despite the evidence to the contrary, that nuclear power is cheaper and cleaner than other forms of electricity generation.

The fact is that electricity from new wind and solar farms is much cheaper than from nuclear power stations. According to the multinational investment consultancy, Lazard, the costs of energy from on-shore wind farms in the USA are in the range 29–56 USD per megawatt-hour (US\$/MWh), from solar farms 36–46 US\$/MWh and from conventional nuclear 112–189 US\$/MWh.

In Australia, the CSIRO and the Australian Energy Market Operator have jointly found that the cost of a wind or solar farm in 2020 will be approximately half of that from new coal-fired power stations, and about one-fifth of that from nuclear power in the form of the non-commercial small modular reactors currently being promoted by nuclear enthusiasts.

Adding sufficient storage to solar and wind to provide equivalent dependability of supply to base-load coal and nuclear will lift the cost of wind and solar in 2020 to equivalence with new coal, but nuclear is still at least 2.5 times the cost of wind and solar.

In 2019 the German Institute for Economic Research found that of 674 nuclear reactors built for electricity generation since 1951, all suffered significant

financial losses.<sup>1</sup> The (weighted) average net present value was around minus 4.8 billion Euros. The Institute concluded that “nuclear energy has always been unprofitable in the private economy”. So why were 674 reactors built around the world, and why do nuclear advocates want more?

## NUCLEAR WEAPONS

One motivation has been to facilitate the covert development of nuclear weapons. It is well documented that India, North Korea, Pakistan and South Africa all used civil nuclear power to assist their respective covert developments of nuclear weapons<sup>2</sup>, while the UK<sup>3</sup> used its first-generation nuclear power stations to supplement weapons-grade plutonium it produced in military reactors.

Other countries began, then discontinued, nuclear weapons programs based on civil nuclear technology: Argentina, Australia, Brazil, Libya, South Korea, Taiwan (twice) and possibly Algeria. Iran is currently engaged in that process.

Today, the UK government is offering to pay the developers of the proposed Hinkley C nuclear power station approximately double the wholesale price of electricity, increasing with inflation, for 35 years.

Andy Stirling and Phil Johnstone from the Science Policy Research Unit at University of Sussex speculate that this huge subsidy is motivated by the wish to keep the nuclear industrial sector technically capable of servicing submarine reactors that carry UK’s Trident nuclear missile delivery system.<sup>4</sup>

There are two main pathways to nuclear explosives – either by enriching uranium in the isotope U-235 or extracting plutonium-239 from spent reactor fuel. At various times Australia has flirted with both. In the 1960s, under the Gorton government, Australia started to build a nuclear power station at Jervis Bay with the purpose of producing electricity for the grid and plutonium for nuclear weapons.

The program was abandoned by the Liberal Party when it feared its ambition to acquire nuclear weapons would become known and result in an electoral liability. Another attempt, secretly to enrich uranium, was made between 1965 and the early 1980s by the then Australian Atomic Energy Commission (now the Australian Nuclear Science and Technology Organisation – ANSTO).

Australia ratified the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in 1973 and the Comprehensive



Nuclear Test Ban Treaty in 1998, but in the early 2000s pressure was again exerted on the government by elements in the foreign policy and security establishment to revive a nuclear weapons program.

## REVIVING THE WEAPONS OPTION

In a 2007 article “Creative and uncomfortable policy choices ahead”, Martine Letts, then Deputy Director of the Lowy Institute, concluded that “a thorough nuclear policy review should also consider which strategic circumstances might lead to Australia’s revisiting the nuclear weapons option”.<sup>5</sup>

The same year, Robyn Lim, a former Acting Head of Intelligence in the Office of National Assessment, wrote that “[we] live in an uncertain world, and must avoid having our uranium enrichment options closed off”.<sup>6</sup>

In 2009, the Australian Strategic Policy Institute joined the discussion, with a report by Rod Lyon, director of its Strategy and International Program. He was quoted on the ABC and in the Canberra Times (15/12/2009) as saying ‘nuclear hedging’ – maintaining or appearing to maintain capabilities to acquire nuclear weapons in a relatively short time – would be prudent, a capability available within 10 or 15 years.

More recent advocates have included Hugh White, who in a 2019 article in Quarterly Essay, reopened discussion on whether Australia should have its own nuclear deterrent. His concern was stimulated by indications that the USA was developing a more isolationist foreign policy.

Defence strategist Paul Dibb has recommended that ‘Australia should at least be looking at options and lead times’.<sup>7</sup>

Peter Layton, a retired RAAF Group Captain who taught at the US National Defense University, expressed concern in a Lowy Institute article about the costs of nuclear weapons and their delivery systems and recommended that Australia should seek to acquire US or British nuclear weapons.<sup>8</sup>

Stephen Fruehling, an academic in the Strategic and Defence Studies Centre at ANU, considered the possibility of developing nuclear weapons to create a defensive moat around the country to deter invasion by sea. He favoured the uranium enrichment pathway to the nuclear explosive.<sup>9</sup>

## EFFECTIVE COVER?

Building a nuclear power station used to be an effective cover for a nuclear weapons program. Today, however, with renewable electricity from wind and solar PV being so much cheaper than nuclear electricity, the credibility of nuclear power as an alternative to fossil fuels has become very low.

Furthermore, a global over-capacity in uranium enrichment since nuclear electricity generation peaked in 2006 makes uranium enrichment for an Australian nuclear program even less credible. In the words of Rod Lyon, an Australian enrichment capability would also be a strategic signal.<sup>10</sup>

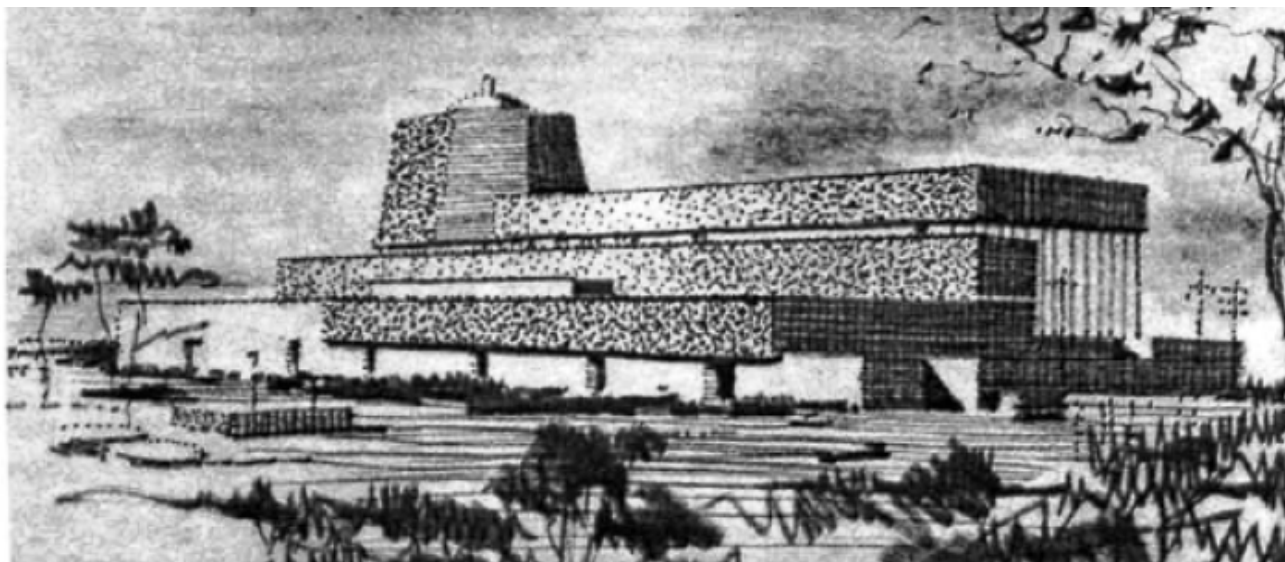
If Australia follows the nuclear path, it provides our neighbours – especially Indonesia, Singapore and Malaysia – with an incentive to follow. The proliferation of nuclear power in South East Asia would signal the start of a regional nuclear arms race, making the neighbourhood less safe than ever.

*This article was originally published in RenewEconomy.*

### References

1. [https://www.diw.de/documents/publikationen/73/diw\\_01.c.670581.de/dwr-19-30-1.pdf](https://www.diw.de/documents/publikationen/73/diw_01.c.670581.de/dwr-19-30-1.pdf)
2. <https://nuclearweaponarchive.org>, <http://www.isis-online.org>
3. <http://www.nature.com/articles/35038256>
4. <https://theecologist.org/2016/jan/15/trident-nuclear-submarines-and-uks-nuclear-power-imperative>
5. <https://nautilus.org/apsnet/the-re-emergence-of-an-australian-nuclear-weapons-option>
6. <https://www.cis.org.au/app/uploads/2015/07/ia82.pdf>
7. <https://www.aspistrategist.org.au/should-australia-develop-its-own-nuclear-deterrent>
8. <https://www.lowyinstitute.org/the-interpreter/why-australia-should-consider-sharing-nuclear-weapons>
9. <https://www.australianforeignaffairs.com/essay/2018/10/defending-australia>
10. <http://www.aspistrategist.org.au/australia-and-the-enrichment-option>

An artist’s impression of the never-completed nuclear power reactor at Jervis Bay on Australia’s east coast. Then Prime Minister John Gorton later acknowledged a hidden weapons agenda behind the project.



# Chaos, accountability and the human race: the energy transition in Collie

Jayla Parkin writes about the impacts of the federal Coalition's announcement that if elected, it will build one or more nuclear power reactors near her home town of Collie, Western Australia.

What you are about to read is not a political article nor is it written by a researcher or journalist. Simply put, it's just an article written by a small-town local community member who found her calling in life to BE better and DO better. She has been dodging curve-balls at every turn, standing up when other people are sitting down, slowly finding her voice and ultimately trying to navigate the world's chaos to ensure that the human race is held accountable for the shit-storm it has created.

I am a 30-year-old single mother of two, a Collie local, an arts enthusiast and mental health advocate, a community organiser and a climate justice union member. I am rough around the edges and very unfiltered. I've been through the trenches of life, I've survived addiction and self-destruction and somehow I've come out the other side still believing that the world and the people in it deserve to be saved.

Collie, in Western Australia, has always been home to me. Not always in the physical way but definitely in the emotional sense of the word. I was born and bred in Collie, I attended primary school here, I graduated high school here, I completed my floristry traineeship here but still I never really felt like I fit in completely, you know?

As soon as I turned 19, I was outta here! I spent the next seven years travelling and working my way around Australia, doing everything in my power to escape my roots but I was always pulled back. I hated it and up until recently I just thought this was bad luck, karma coming to bite me on the ass or some type of voodoo magic bullshit.

Then one day, my point of view and beliefs just changed. I realised that this was all intentional, the universe's way of leading me through the experiences I needed to find my calling at a later age? No-one can know for sure but whatever it was I am thankful! Now, you are probably wondering what any of this has to do with transitioning to renewables and the nuclear garbage but please bear with me because I promise you, it has EVERYTHING to do with it.

## THE ENERGY TRANSITION IN COLLIE

My whole life, my brain has been manipulated to believe that Collie is just a dirty mining town, a hole in the ground

and that the community members are idiots. WOW, right? Even just writing that down and reading it back to myself, I can see that that way of thinking is complete garbage. BUT it's taken a lot of work on myself to be able to see this clearly. You need a special sort of bullshit filter these days but not everyone knows this and believe me when I say: it is VERY hard to make someone believe they are valued when they have been told their whole life that they are not.

For those of you who don't know, Collie is a coal mining town and it has been at the centre of Western Australia's power source for a very long time. Now, despite all the efforts, contributions, blood, sweat and tears that the Collie community has made throughout history, we have not been given the respect we deserve through this transition. The town and its community members have been treated like guinea-pigs and a stepping stone in a pathetic political shit-show BUT I have a feeling that's about to change. We community members are finally starting to stand up for ourselves and it's goddam exciting.

For too long, Collie has been filled with cliques, racism and a tonne of generational trauma. It's very clear that the coal mining industry hasn't been directly beneficial to everyone that calls Collie home.

Personally, I am not transitioning from the mining industry into renewables but I'd like to make it very clear that YES I believe this transition should benefit me as well, 100%! And I am here, standing up for my rights and the rights of others like me: community members who haven't held a privileged position in the town before now. The voices that were never heard, simply because they were never asked, and the people who were pushed aside and put in a box labelled 'not an asset to Collie'.

Keeping all of this in mind, I was pretty determined to see what I could do to be more involved in the community through the transition. Around July of 2021 (I think) a friend of mine, Leonie Burton, reached out to me and asked if I wanted to join in on a planning workshop run by Naomi Godden (Edith Cowan University) and Jaime Yallup Farrant (Climate Justice Union). I had just given birth to my first child and become a single mother so when she told me that I would be paid a \$50 honorarium to attend, I agreed instantly (nappies are expensive, am I right?!).



I was blown away and the workshop exceeded all my expectations. It was so well organised, included a diverse range of community members and the content was everything I was looking for. I had attended events like this in the past but I just felt like a number and they never usually amounted to much so I would lose interest pretty quickly.

One workshop down and I was hooked. These workshops and events gave me a safe place to ask questions and learn more without feeling like the outsider I've been most of my life. I was given opportunities that I never thought possible and it made me feel really good about myself. We had become a family and supported everyone involved – no matter how weird and wacky we were. “THIS IS HOW A COMMUNITY SHOULD BE” – I thought to myself.

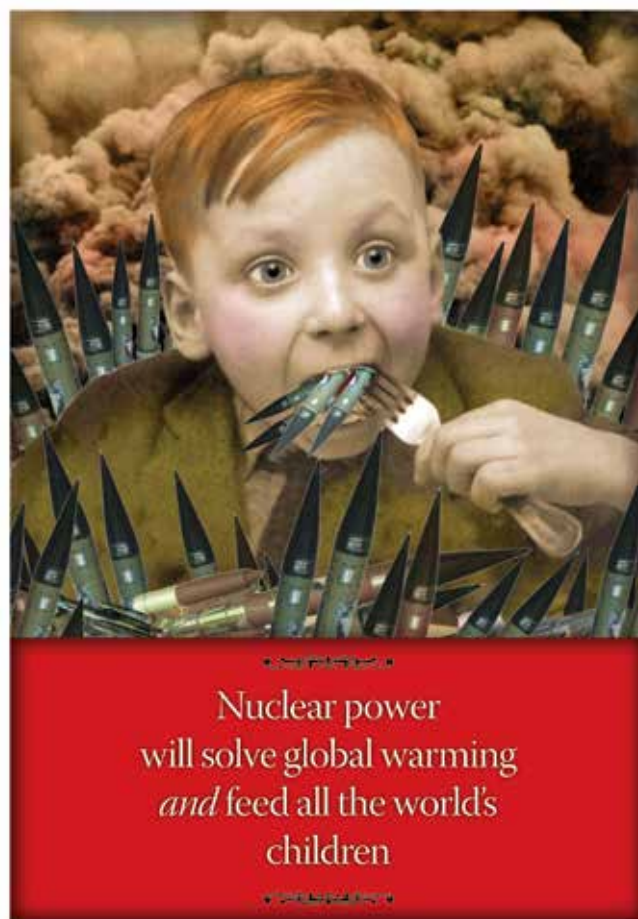
From these workshops we put out a survey to the community, then after we had our findings we held more workshops and I was asked to photograph Collie and its surrounds. The findings and photographs were made into a book report which we launched to the community at a twilight event.

We have also met with the net zero emissions parliamentary committee on country in Collie, spoke as a panel at the 2024 petro-cultures conference in Perth, presented our submissions as a panel at a public hearing of the federal parliamentary inquiry into nuclear power generation in Australia, attended lots of different energy events, we host seasonal yarns every two months to discuss (and act on) what's happening in the community, and I am currently designing our very own calendar.

All of these opportunities have been amazing and we all felt like we had built momentum in the community with what we were doing. That was until Peter Dutton stuck his nose in where he wants the nuclear to shine.

## NUCLEAR POWER WAS THE BOMB WE DIDN'T NEED

Nuclear power was the bomb (pardon the pun) that we didn't need. Collie was working towards and investing so much time, energy and resources into renewables. The community was finally starting to gain a sense of direction



and didn't feel as scared. Dutton's announcement that a Coalition government would build one or more nuclear power reactors near Collie sent the community into absolute chaos. The people of Collie became divided, angry and scared. Nothing was sure anymore and it was easy to see that everyone was walking around on eggshells.

Personally, If I don't understand something, I will research my heart out to the point I'll end up in such a deep internet black hole with more tabs opened that my brain can ever handle at capacity. It's usually overwhelming but with a sense of "ahhhh I get it now" but not in this case. I have been faced with more information road-blocks than I can handle, I have been lied to, painted as a monster from the higher-ups for asking simple questions (that they still couldn't answer) and been told that even if a majority voted no that the nuclear reactors would be built anyway.

Nothing about this sounds good or positive for our future. They are counting on people lacking the knowledge needed to understand how dangerous this would be for Australia. So I am going to do everything I can to keep these 'higher-ups' accountable for the chaos they have caused. Collie people want to know the truth and I plan on doing everything I can do to help us get it. After all this is my calling. TO DO BETTER AND TO BE BETTER, ALWAYS!

# Fukushima in Australia

The Don't Nuke the Climate campaign has produced an online interactive map illustrating the radioactive fallout zones in the event of a Fukushima-scale nuclear disaster in any of the seven regions targeted by the Coalition for nuclear power reactors. You can view the interactive map at [dont-nuke-the-climate.org.au](http://dont-nuke-the-climate.org.au)

Following the meltdowns, fires and explosions that destroyed four of the reactors at Fukushima in March 2011, there was a mandatory evacuation zone out to 20 kms. In different parts of the zone from 20 kms to 30 kms, evacuation was either mandatory or residents could choose between evacuation and sheltering indoors. The mandatory evacuation zone covered 807 sq kms, resulting in the evacuation of 191,000 people.

Applying a 30km evacuation zone in the event of a nuclear accident at one of the seven nuclear power sites proposed by the Coalition, the following towns would be evacuated:

- ★ NSW towns within 30 kms of Mount Piper Power Station: Portland, Cullen Bullen, Capertree, Wallerang, Marrangaroo, Lithgow, Clarence, Sunny Corner, Dargan, Hartley.

- ★ NSW towns within 30 kms of Liddell Power Station (closed): Muswellbrook, Aberdeen, Camberwell, Singleton, Jerrys Plains, Denman, Mount Thorley.

- ★ Victorian towns within 30 kms of Loy Yang Power Station: Morwell, Moe, Newborough, Yallourn, Traralgon, Traralgon South, Koornalla, Devon North, Churchill, Boolarra, Yinnar, Yallourn North, Tyers, Glengarry, Toongabbie, Cowwarr, Rosedale, Gormandale, Carrajung, Won Wron.

- ★ Queensland towns within 30 kms of Callide Power Station: Biloela, Jambin, Thangool, Lawgi Dawes.

- ★ Queensland towns within 30 kms of Tarong Power Station: Cooyar, Pimpimbudgee, Maidenwell, Tarong, Brooklands, Boonenne, Taabinga, Coolabunia, Kingaroy, Glan Devon, Nanango, Taromeo, Benarkin, Benarkin North, Blackbutt, Blackbutt North, Yarraman.

- ★ SA towns within 30 kms of Northern Power Station (closed): Port Augusta, Blanche Harbor, Douglas Point, Quorn, Miranda.

- ★ WA towns within 30 kms of Muja Power Station: Collie, Mungallup, Allanson, Preston Settlement, Cardiff, Mumballup.

**Health risks:** Radiation biologist Dr. Ian Fairlie, who served as the scientific secretary to the British Government's Commission for Investigation of Radiation Risks of Internal Emitters, estimates around 5,000 cancer deaths due to radiation exposure from the Fukushima disaster. An additional 2313 nuclear disaster-related deaths among evacuees from Fukushima prefecture had been identified by the Japanese authorities by September 2020.

**Financial risks:** The financial costs of the Fukushima disaster amount to many hundreds of billion dollars. If indirect economic impacts of the disaster are included, the cost exceeds one trillion dollars. Likewise, Chernobyl was a trillion-dollar disaster. A trillion-dollar nuclear disaster would amount to a



Source: Fukushima Prefecture Government

cost of \$40,000 for every single Australian. It is important to note that insurance policies from many of Australia's major insurers contain specific text excluding coverage for nuclear disasters. None of these will insure homes, cars or possessions against a nuclear accident or release.

**Housing risks:** Housing prices have been shown to fall due to proximity to nuclear plants. The *Nuclear Power* publication acknowledges: "Studies have shown that properties located within close proximity to a nuclear power plant may experience a decrease in value due to the perceived risks and potential for accidents. Buyers are often concerned about the safety of living near a nuclear facility, leading to a lower demand for these properties and consequently reduced prices."

**Agricultural risks:** Nearly 12,000 farms are located within 80 km of the seven sites targeted by the Coalition for nuclear reactors. A July 2024 Joint Ministerial Statement notes that in similar countries, including the US, states have produced detailed plans to manage radioactive emergencies from nuclear reactors within a similar radius of farmland (known as the "ingestion zone"). These states have set out detailed guidelines to be followed by farmers, processors and distributors within nuclear ingestion zones to attempt to protect their food supply.

**Emergency responses to nuclear accidents:** In their submission to the parliamentary inquiry into nuclear power generation in Australia, Emergency Leaders for Climate Action warn that nuclear reactors would introduce significant and unnecessary risk to Australian communities and emergency responders, including firefighters already stretched by escalating climate fuelled disasters.



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# JOIN THE STRUGGLE TO STOP URANIUM MINING



# Where is the ‘mature debate’ about the health impacts of nuclear power?

Dr. Margie Beavis

When it comes to nuclear radiation, there is a clear disconnect between the medical evidence and the views of the Coalition. Since the 1950s we have known there is a link between X-rays in pregnant women and leukemia and other cancers in their children. It is not for nothing there are signs in every radiology department asking if you are pregnant.

The current shrill denunciations of potential health risks associated with nuclear power plants as a “scare campaign” may yet prove to be an own goal, as it has drawn attention to the issue. Communities considering hosting a nuclear reactor should be aware of the evidence regarding real-world health impacts. Informed consent matters, in politics as well as medicine.

## CHILDHOOD LEUKAEMIA

Extra cases of leukaemia occurring in children living near nuclear power plants have caused concern and controversy over decades. In the 1980s excess cases of leukaemia and lymphoma were noticed around the Sellafield nuclear plant in England.

A UK government investigation unexpectedly found that the risks for leukaemia and lymphoma were higher than in the surrounding population. In 2007, the US Department of Energy examined all the reliable data available worldwide, confirming a significant increase in leukaemia for children living near nuclear power plants.

The clearest findings on this subject come from a large national German study from 2008, which examined leukaemia among children living near any of Germany’s 16 operating nuclear plants over a 25-year period.

It showed that the risk of leukaemia more than doubled for children living within 5 km of a nuclear plant. Nuclear proponents quote a UN study with an 80 km radius showing no harm, but the much larger distance dilutes any problems for those living much closer.

Just last June, a very large (over seven million people) meta-analysis of reliable data from a range of studies found residents of any age living 20–30 km from nuclear power stations had an average 5% increased cancer risk, and again children under five were the worst impacted. Thyroid cancer increased by 17 per cent and leukemia by 9 per cent.

## WORKERS

For workers in the nuclear industries, there is also clear evidence of increased risk of death from cancer. Indeed, recent findings show even some non-cancer diseases are increased, such as heart attack and stroke.

The best evidence for this comes from INWORKS, a multi-country study of over 300,000 radiation industry

workers observed for more than 30 years. Their radiation exposures and health outcomes were carefully monitored and compared with the general population.

The cancers caused by radiation blend in with other cancers – they are not like the characteristic mesothelioma caused by asbestos. The heart attacks and strokes have the same problem. As a result, it takes large population studies and careful long-term monitoring to know what the risks are.

## NUCLEAR MEDICINE

The Coalition has also made claims linking radiology, radiotherapy and nuclear medicine to nuclear power that are patently false and deliberately misleading.

A letter sent by Coalition MPs to their constituents earlier this year claimed that: “Nuclear energy already plays a major role in medicine and healthcare, diagnosing and treating thousands of Australians every day”.

We do not have, and have never had, nuclear power in Australia, and the nuclear power proposal has no connection to our world class nuclear medicine, radiology or radiotherapy services.

Doctors are increasingly concerned about the radiation exposures from medical imaging, particularly in children. CT scans and nuclear medicine scans are done only when essential, and the benefit outweighs the risks. We worry about cumulative lifetime exposures, especially in children.

## FOSSIL FUELS

But perhaps the biggest health issue of all with the Coalition’s proposal is the increased use of coal and gas, for decades to come. Climate change has started, and we have to take action as soon as possible.

From a health perspective, recklessly worsening future heat waves, fires, storms, floods and droughts by delaying the transition from coal for political gain is unconscionable.

Finally, the Coalition’s response to my public submission and testimony to a government inquiry has been to attack me as a past Greens candidate. They neglect to report my qualifications to speak on this.

In playing the man and failing to address the evidence, they fail their own request for an adult conversation on nuclear energy.

*Dr Margaret Beavis OAM MBBS FRACGP MPH is a former GP. She teaches at Melbourne University and has lectured on nuclear issues to MPH students. She is vice president of the Medical Association for Prevention of War.*

**NUKE POWER**  
**A DEAD END**



**NUCLEAR POWER IS DANGEROUS, WASTEFUL AND NO SOLUTION TO CLIMATE CHANGE**

**NUCLEAR INDUSTRY**  
**IS COSTLY**  
**CONTAMINATING**  
**THE EARTH**

**NUCLEAR POWER**  
**IS DANGEROUS**  
**WASTEFUL AND**  
**NO SOLUTION TO**  
**CLIMATE CHANGE**



**URANIUM**  
**LEAVE IT**  
**IN THE**  
**GROUND**

**TOXIC**  
**WASTE**



**RADIOACTIVE**  
**WASTE**



**RADIOACTIVE**  
**WASTE**



**TOXIC**  
**WASTE**





# Health risks from radiation exposures

Tony Webb

Opposition to the Coalition's nuclear energy proposals has focussed on issues of cost, timing, relevance to climate change, and its use as a political smokescreen for coal and gas profiteering.

Of more direct concern to workers and communities affected are the significant, unavoidable health risks from exposures to ionising radiation from these facilities. These risks include: increased rates of cancers, cardiovascular and other diseases, increased risk of dementia, long term genetic effects and particularly elevated risks of childhood cancers in families living close to these radiation-emitting facilities.

These health risks are unavoidable. They result from routine exposures, not just accidents like Harrisburg, Chernobyl, or Fukushima. People are exposed in all stages of the nuclear fuel cycle: uranium mining, 'enrichment', fuel fabrication, nuclear-electricity generation, spent fuel storage and reprocessing, reactor decommissioning, and keeping radioactive wastes isolated from human contact for thousands of years.

For workers in, and communities living close to nuclear facilities there is a simple important message: there is no safe level of radiation. Any exposure can be the one that causes damage that can lead to cancer or other health effects including genetic defects being passed onto future generations.<sup>1</sup>

This is a hit or miss process where damage at a cellular level can cause the uncontrolled replication that may show up years later as what we call a cancer. Radiation may either initiate or promote the process so adding to risks faced by workers, exposed to other environmental health hazards.

## OCCUPATIONAL EXPOSURE LIMITS

Assessing the level of risk has been a challenge and a source of controversy over many years. Estimates used to set current protection standards are mainly based on the studies of the Hiroshima and Nagasaki bomb survivors who received high radiation exposures over short time periods. It was assumed, incorrectly, that lower doses over longer periods were less damaging.

An international trade union campaign in the 1980s led to revision of the annual occupational exposure limit set by the International Commission of Radiological Protection (ICRP) from 50 milliSieverts (mSv) a year down to effectively 20 mSv (50 mSv in any year but a five-year limit of 100 mSv).<sup>2</sup>

Since then, a major study of nuclear industry workers in France the UK and USA (INWORKS)<sup>3</sup> has shown cancer risks 2.6 times higher than the ICRP estimates. In addition, radiation-exposed workers face approximately double the expected risks of cardiovascular disease,<sup>4</sup> increased risk

of genetic damage that can be passed on to children and future generations,<sup>5</sup> and elevated risks of brain damage and dementia.<sup>6</sup> Women workers are also at greater risk.<sup>7</sup>

Combined, this evidence suggests that the annual occupational limit should be tightened further by at least a factor of four – from 20 mSv to no more than 5 mSv with a lifetime exposure limit in the range of 50 to 100 mSv.

## COLLECTIVE RISKS

As there is no safe level, it is the total exposure across a population that determines the total health damage. Reducing individual exposures by spreading the dose across a larger number of workers – a practice common in the US nuclear industry where casual workers are hired as 'radiation sponges' for the more 'radiation-dirty' work during annual clean-up and maintenance – does not reduce the number of cancer deaths. It may actually increase them. An exposed worker can only die of cancer once!

This collective risk from low doses affects communities living close nuclear facilities with younger children particularly at risk. Those living within 5 km of nuclear power plants in the UK, Germany, France and Switzerland showed a 37% higher risk of leukaemia.<sup>8</sup>

## RISKS IN AUSTRALIA

Australia already has people at risk. Uranium miners, indeed all underground hard rock miners, are exposed to radioactive radon gas which can decay to a radioactive particle lodged in the lung.

We have two 'Research Reactors' at Lucas Heights in NSW, one of which is shortly due for 'decommissioning', and we have a problem with long-term management of radioactive wastes.

We will be getting AUKUS nuclear submarines, exposing naval personnel and those involved in their eventual decommissioning.

As well as worker exposures in the health sector, we have seen a five-fold increase since 1990 in the population collective dose from nuclear medicine and diagnostic radiology – some 30-50% of which may have been medically unnecessary,<sup>9</sup> and likely causing several thousand additional cancers a year.

*Tony Webb has 45 years of experience working with trade unions, environment groups, and communities in the UK, USA, Canada and Australia on issues of health and safety from exposure to ionising radiation.*

#### Notes and References

1. The United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR); the US National Academy of Sciences Committee on the Biological Effects of Ionising radiation (BEIR) and the International Commission for Radiological Protection (ICRP) all accept the 'no threshold' and as the basis for setting radiation protection standards.
2. ICRP, 1991. 1990 Recommendations of the International Commission on Radiological Protection. ICRP Publication 60. Ann. ICRP 21 (1-3). [www.icrp.org/publication.asp?id=ICRP%20Publication%2060](http://www.icrp.org/publication.asp?id=ICRP%20Publication%2060)
3. Richardson D.B. et al. 2023. Cancer mortality after low dose exposure to ionising radiation in workers in France, the United Kingdom, and the United States (INWORKS): cohort study. *British Medical Journal* 2023;382:e074520 doi: <https://doi.org/10.1136/bmj-2022-074520>
4. Little P. et al. Ionising radiation and cardiovascular disease: systematic review and meta-analysis. *BMJ* 2023;380:e072924 doi: <https://doi.org/10.1136/bmj-2022-072924>
5. National Academies of Sciences, Engineering, and Medicine. 2006. Health Risks from Exposure to Low Levels of Ionizing Radiation: BEIR VII Phase 2 (2006) - Chapter: 4 Heritable Genetic Effects of Radiation in Human Populations. The National Academies Press. <https://doi.org/10.17226/11340>
6. Srivastava T et al. 2023. Exposure to Ionizing Radiation and Risk of Dementia: A Systematic Review and Meta-Analysis *Radiation Res.* 2023 May; 199(5): 490-505. doi: 10.1667/rade-22-00153.1 [www.ncbi.nlm.nih.gov/pmc/articles/PMC10249679/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC10249679/) See also: Elsner B. & Wozny F. 2023. Long-run exposure to low-dose radiation reduces cognitive performance. *Journal of Environmental Economics and Management* Vol 118 <https://doi.org/10.1016/j.jeem.2023.102785>
7. Narendran, N. et al. 2019. Sex Difference of Radiation Response in Occupational and Accidental Exposure. *National Library of Medicine US National Institute of Health*: 10.3389/fgene.2019.00260 [www.ncbi.nlm.nih.gov/pmc/articles/PMC6509159](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC6509159)
8. See Ian Fairlie [www.ianfairlie.org](http://www.ianfairlie.org) re childhood cancer risks – in particular:
  - Fairlie I. 2010 Childhood Cancer Near German Nuclear Power Stations. *Journal of Environmental Science and Health, Part C*. 28:1–21 (2010) <https://pubmed.ncbi.nlm.nih.gov/20390965/>
  - Fairlie I. 2014 A hypothesis to explain childhood cancers near nuclear power plants. *Journal of Environmental Radioactivity* V 133 July 2014 pp 10-17 [www.ianfairlie.org/news/childhood-leukemias-near-nuclear-power-stations-new-article/](http://www.ianfairlie.org/news/childhood-leukemias-near-nuclear-power-stations-new-article/)
  - Fairlie, I. 2021. Radiation and Childhood Cancer: the risks of low-level radiation with particular reference to cancer incidence and mortality among children. Report produced for UK Children with Cancer [www.childrenwithcancer.org.uk](http://www.childrenwithcancer.org.uk)
  - Fairlie I. and Folkers C. 2024. The Scientists who Alerted us to the Dangers of Radiation. *Ethics International Press* UK.
9. For details of concerns re medical exposures see [www.racgp.org.au/afp/2013/june/radiation-safety](http://www.racgp.org.au/afp/2013/june/radiation-safety) though only cancer risks are cited and these still use the outdated estimates.

# Alliance formed to fight Dutton's nuclear reactor plan

The federal Coalition wants to build nuclear power reactors at seven sites across five states: Queensland, NSW, Victoria, SA and WA. Affected people in the seven targeted communities have formed a Community Alliance to fight off the nuclear threat.

At the website [nonukes.com.au](http://nonukes.com.au) you can learn more, donate, and sign the petition.

The Community Alliance states:

*We are community members in the seven target regions identified by Peter Dutton's Liberal National Coalition as locations for nuclear reactors. We stand united against being bullied into accepting nuclear reactors in our regions.*

*This is a distraction from the real work that needs to be done. Nuclear is designed to distract and create false debate. Our communities have already identified what transition needs to deliver, secure local employment, affordable housing, affordable and reliable renewable energy with sufficient storage, affordable and accessible childcare, healthcare and public transport.*

*The Coalition needs to stop playing games with the regions and with bipartisan support, commit to supporting the regions as they transition from fossil fuels.*



*The evidence about nuclear reactors is they are not a viable option for our regions or anywhere in Australia. There are clear alternative solutions to fulfill our energy requirements with renewable energy. Australians are grasping the opportunities in renewable energy now and governments need to support the transition not block or divert away from it.*

*Our communities are already involved in the transition of energy. Projects are well underway and locals already have jobs constructing our sustainable energy future with renewable energy.*

*We urge the broader Australian community to support us in demanding transparency, fairness and accountability from the federal Coalition.*

Visit [nonukes.com.au](http://nonukes.com.au)

# ANFA does not support the establishment of a nuclear power industry in Australia

26 January 2025 – The Australian Nuclear Free Alliance (ANFA) does not support the establishment of a nuclear power industry in Australia. We condemn the irresponsible moves by the federal Coalition to promote nuclear power as a response to the climate emergency. As representatives of the communities most directly impacted by the Australian nuclear industry across generations, we utterly reject this approach.

Since 1997, ANFA has been part of a strong history of Aboriginal resistance to the nuclear industry. Aboriginal-led campaigns in Australia have seen uranium mining projects halted and plans for a radioactive waste dump frustrated and stalled. The nuclear industry continues to target First Nation people's land for poisonous projects and Aboriginal people continue to resist.

We have long memories; we remember the atomic weapons test at Maralinga, Monte Bello and Emu Fields. There has been no justice following these weapons testing programs despite the deep adverse impact on human health and cultural connection. We remember the broken promises from uranium miners, the accidents, the leaks and the changes to our different Countries.

Many people have passed away, great people who spent too much of their lives having to fight to protect their Country. We remember and honour them and their love for Country and community.

The nuclear industry and the government keep ignoring and dismissing the cost of this industry. We wonder who is going to count the loss of lives in the future to come, the cancers and sickness and the lands that have been polluted?

Nuclear activities in Australia provide many examples of both historic injustices and current threats to human rights and self-determination principles. ANFA members' lived experience has been characterised by limited or no inclusion in consultation and approval processes, highly constrained or non-existent project veto rights and systemic and profound imbalances in resources, capacity, institutional support and access to information and decision shapers and makers.

We acknowledge that Australia faces energy challenges and urge the government to transition away from dirty, polluting industries that impact on the homelands and culture of First Nations peoples. Nuclear power would create more problems than it would solve and major impacts would be on the lands of Aboriginal people.

ANFA co-chair Vicki Abdullah-McCabe: "How we are going to meet our climate emissions target if hundreds of billions of dollars goes



*towards nuclear power, not real climate solutions ... It is going to affect our people, our country, our animals and the environment in general."*

Australia's energy future is not a choice between coal and nuclear. Choosing nuclear power would take away huge amounts of money from the current trajectory towards renewable energy. We have abundant sun and wind and urge the government to continue the pathway to cleaner and safer options than nuclear power in our national transition to a better energy supply in proper and sincere consultation with local communities and Traditional Custodians.

ANFA President, Auntie Sue Coleman-Haseldine: "A message to the people who are saying that nuclear power is the way forward: think about the waste, think about your children, think about your grandchildren. You make decisions today that will affect the next generations for 100,000 years to come. Look towards a better brighter future, and it's not nuclear power. That's not the future. That's death."

ANFA reaffirms that human wellbeing is more important than private profit. We reject the destruction, pain and ongoing risks caused by the nuclear industry, including the impacts of radiation on health, the negative impacts of legacy uranium mines and nuclear tests, the need for improved rehabilitation of impacted sites and we restate steadfast opposition to nuclear waste dumping.

**WE MUST PROTECT COMMUNITIES, COUNTRY, WATER, SACRED SITES AND OUR ANIMAL KIN. WE SAY NO TO NUCLEAR RISKS AND DAMAGE.**



# Nuclear colonialism in Canada

Susan O'Donnell and Robert Atwin

The global nuclear industry has been in decline for almost three decades. One reason is the risk and lack of permanent solutions to the long-lived radioactive waste produced by nuclear reactors. Around the world, Indigenous people are disproportionately affected by radioactive pollution and are at the forefront of resistance to nuclear waste dumps.

A new study released in New Brunswick in November 2024 analysed statements about nuclear energy and radioactive waste by Indigenous communities in New Brunswick, Quebec and Ontario, the only Canadian provinces with nuclear power reactors. The 18 power reactors in Ontario and the one in New Brunswick, as well as the one in Quebec shut down in 2012, have all produced hundreds of tons of radioactive waste.

The study found that overall, Indigenous nations and communities do not support the production of more nuclear waste or the transport and storage of nuclear waste on their homelands. They have made their opposition known through dozens of public statements and more than 100 submissions to the regulator, the Canadian Nuclear Safety Commission.

At the same time, the federal government positions nuclear energy as a strategic asset to Canada now and into the future. The government recently launched a policy to get nuclear projects approved more quickly, with fewer regulations. The government's position has created an obvious conflict with Indigenous rights-holders.

Radioactivity cannot be turned off – that's what makes nuclear waste so dangerous. Indigenous opposition to nuclear waste is rooted in values that respect the Earth and the need to keep life safe for generations into the future. The radioactivity from high-level waste can take millennia to decay and if exposed, can damage living tissue in a range of ways and alter gene structure.

The new study analysed 30 public statements about nuclear energy and radioactive waste and reviewed submissions to the Canadian Nuclear Safety Commission (CNSC) by Indigenous nations and communities. The report also discusses the status in Canada of the United Nations Declaration on the Rights of Indigenous Peoples.

The report, *Indigenous Views on Nuclear Energy and Radioactive Waste*, states that Indigenous nations understand that producing and storing nuclear waste on their territories without their free, prior and informed consent is a violation of their Indigenous rights.

Also released with the report is a video, *Askomiw Ksanaqak (Forever Dangerous): Indigenous Nations Resist Nuclear Colonialism*.

The study report and the video were co-published by the Passamaquoddy Recognition Group and the CEDAR project (Contesting Energy Discourses through Action Research) at St. Thomas University in Fredericton.

The CEDAR project's Indigenous partners – Chief Hugh Akagi of the Peskotomuhkati Nation in Canada and Chief Ron Tremblay of the Wolastoq Grand Council – each wrote a foreword to the report. Both Indigenous leaders are opposed to the production of radioactive waste at the Point Lepreau nuclear site on the Bay of Fundy and have not consented to plans by NB Power to develop at least two experimental nuclear reactors at the site that, if built, would produce more and different forms of radioactive waste.

In his foreword, Chief Akagi explains that the existing waste at Point Lepreau should be “properly stored and looked after for the thousands of years it will take until the waste is no longer dangerous.” He stands behind the five principles of the Joint Declaration between the Anishinabek Nation and the Iroquois Caucus on the Transport and Abandonment of Radioactive Waste: no abandonment; monitored and retrievable storage; better containment, more packaging; away from major water bodies; no imports or exports.

Chief Tremblay in his foreword raises the importance of respecting the treaty relationship and the need to protect the Earth. “We believe that the Earth is our Mother, and that she has been violated, she has been hurt, she has been raped, she has been damaged for far, far too long,” he writes.

CEDAR is a five-year project studying energy transitions in Canada with a focus on New Brunswick. One project objective is to support marginalized voices in discussions about the energy transitions. The new report was co-produced to amplify Indigenous voices concerned with the nuclear industry and its waste.

The report's analysis highlights that colonialism is ongoing in Canada. The report suggests that Indigenous voices are being ignored for the benefit of the nuclear industry, meaning the federal government remains complicit in the violation of Indigenous rights.

*The report, Indigenous Views on Nuclear Energy and Radioactive Waste, is online at [cedar-project.org/indigenous](https://cedar-project.org/indigenous). The video Askomiw Ksanaqak (Forever Dangerous) is online at [youtube.com/watch?v=9i7XtLGFqyY](https://youtube.com/watch?v=9i7XtLGFqyY)*

*Susan O'Donnell and Robert Atwin are co-authors, with Abby Bartlett, of the new report. Susan is an adjunct research professor and lead investigator of the CEDAR project at St. Thomas University ([cedar-project.org](https://cedar-project.org)). Robert is a research assistant at the Passamaquoddy Recognition Group ([qonaskamkuk.com](https://qonaskamkuk.com)) and a member of Oromocto First Nation.*

# Australia's First Nations defeat nuclear waste dump plans again and again

The FoE Melbourne website has a series on the wins of the anti-nuclear movement in Australia ([melbournefoe.org.au/wins](http://melbournefoe.org.au/wins)). Here we celebrate five successful Aboriginal-led campaigns to prevent the imposition of nuclear waste dumps.

## 'GET THEIR EARS OUT OF THEIR POCKETS': THE KUNGKA'S FAMOUS VICTORY

In 1998, the Howard government announced its intention to build a national nuclear waste dump near Woomera in SA. Leading the battle against the dump were the Kupa Piti Kungka Tjuta, a council of senior Aboriginal women from northern SA. Many of the Kungkas personally suffered the impacts of the British nuclear bomb tests at Maralinga and Emu Field in the 1950s.

The Kungkas continued to implore the government to 'get their ears out of their pockets', and after six long years the

government did just that. In the lead-up to the 2004 federal election, the Howard government decided to abandon the dump plan.

The Kungkas wrote in an open letter: "People said that you can't win against the Government. Just a few women. We just kept talking and telling them to get their ears out of their pockets and listen. We never said we were going to give up. Government has big money to buy their way out but we never gave up."



## NO DUMP AT MUCKATY: 'TODAY WILL GO DOWN IN HISTORY'

In 2007 the Northern Land Council proposed Aboriginal land at Muckaty, NT, for a national nuclear waste dump, despite widespread opposition from Traditional Owners. Their determined community campaign gained support from trade unions, public health and human rights organisations around the country.

On 19 June 2014, Muckaty Traditional Owners celebrated after learning that plans for a nuclear dump at Muckaty had been scrapped by the Abbott government.

Marlene Nungarrayi Bennett said, "Today will go down in the history books of Indigenous Australia on par with the Wave Hill Walk-off, Mabo and Blue Mud Bay. Justice has prevailed and this is a win for all Territorians."

Dianne Stokes said, "We want to let the whole world know that we stood up very strong. We want to thank the supporters around the world that stood behind us and made us feel strong."

Isobel Phillips said: "We kept going with the fight until we won our land back. Our heart jiggled with joy and smiled when we heard the good news."



Marlene Bennett celebrating the Muckaty win with Nat Wasley.



## NO INTERNATIONAL NUCLEAR WASTE DUMP IN SA

In 2015, South Australians were shocked to learn that the state Labor government wanted to import vast amounts of nuclear waste from around the world and dump it on Aboriginal land as a money-making venture.

Traditional Owners and many others went to work building a public campaign to oppose the nuclear dump.

The government established a Citizens' Jury which heard from First Nations people about the legacy of the nuclear industry on their lands and people. The Citizens' Jury voted overwhelmingly against the waste import plan. The Jury's report said: "There is a lack of Aboriginal consent. We believe that the government should accept that the Elders have said NO and stop ignoring their opinions."

The plan to turn SA into the world's nuclear waste dump quickly fell apart after the Citizens' Jury verdict.

"We know nuclear is not the answer for our lands and people, we have always said no," said Karina Lester, Yunkunytjatjara woman and No Dump Alliance founder and spokesperson.



Adnyamathanha Traditional Owners Heather Stuart, Vivianne McKenzie and Regina McKenzie at a 3000-strong protest in Adelaide in October 2016.

## NAPANDEE: 'I AM SO HAPPY FOR THE WOMEN'S SITES'

In early 2020, the federal Coalition government nominated Napandee, near Kimba on farming land in SA, as the site for a national nuclear waste dump.

The government orchestrated a "community ballot" which excluded Barngarla Traditional Owners.

The Barngarla Determination Aboriginal Corporation sought a judicial review of the declaration of the Napandee site and in 2023 the Federal Court found that a former minister's "apprehended bias" and "pre-judgement" were so egregious as to invalidate the declaration of the site. The Labor government accepted the Court's decision and abandoned the proposed nuclear dump.

Auntie Dawn Taylor, a Barngarla Elder, said, "I am so happy for the women's sites and dreaming on our country that are not in the firing line of a waste dump. I fought for all this time for my grandparents and for my future generations as well."



A 3000-strong protest in Adelaide in October 2016 against plans for national and international nuclear waste dumps on Aboriginal land in SA.

## NO DUMP ON ADNYAMATHANHA YARTA

From 2015 to 2019, a property on Adnyamathanha land in the Flinders Ranges, SA, was targeted for a national nuclear waste dump. The land was nominated by former Liberal Party senator Grant Chapman and his nomination was endorsed by the federal Coalition government.

The proposed dump site was adjacent to the Yappala Indigenous Protected Area. Adnyamathanha Traditional Owners weren't consulted. Even Traditional Owners who live next to the proposed dump site at Yappala Station weren't consulted.

The nuclear dump plan was strongly contested and the campaign was won in December 2019 following a ballot that found a majority of people in the area opposed the plan.

Adnyamathanha Traditional Owner Enice Marsh said: "We are very relieved of course, after all of the torture and torment over the past four years by government and industry. I'm glad it's over for this stage and I hope it's over permanently."



Barngarla Traditional Owners outside the Federal Court in Adelaide, March 2023.



# The politics of nuclear waste disposal: Lessons from Australia

Jim Green and Dimity Hawkins

*This is an edited extract from a detailed article published by the Asia-Pacific Leadership Network. The article is online at [apl.n.network](http://apl.n.network) or [tinyurl.com/politics-nuclear-waste](http://tinyurl.com/politics-nuclear-waste)*

Radioactive wastes are generated across the nuclear fuel cycle in a myriad of different forms, including tailing waste at uranium mines, depleted uranium waste at uranium enrichment plants, irradiated ('spent') nuclear fuel from power reactors, and waste streams from the reprocessing of irradiated nuclear fuel. Nuclear weapons testing is another significant source of radioactive wastes. Other sources include the use of nuclear research reactors for scientific, industrial, and medical purposes.

Globally, there have been many challenges with the storage and disposal of nuclear waste. No country has an operating repository for high-level nuclear waste. The only operating deep underground repository for intermediate-level waste, the Waste Isolation Pilot Plant in the United States, was shut for three years following a February 2014 chemical explosion, the result of incompetent management, cost-cutting, and regulatory failures.

In addition to the technical challenges of isolating radioactive materials for periods of centuries or millennia, radioactive waste management has posed profound social challenges. Often radioactive waste is imposed on unwilling communities, such as that created by nuclear weapons testing in Pacific countries under colonial control. The risks and harms of waste impact disproportionately on Indigenous Peoples and marginalised communities.

History demonstrates repeatedly that cooperative, inclusive approaches to radioactive waste management are likely to be more effective than top-down, authoritarian approaches in addition to the inherent value in protecting and championing democratic rights.

The UK Committee on Radioactive Waste Management notes:

*"Experience in the UK and abroad clearly demonstrates the failures of earlier 'top down' mechanisms (often referred to as 'Decide-Announce-Defend') to implement long-term waste management facilities. It is generally considered that a voluntary process is essential to ensure equity, efficiency and the likelihood of successfully completing the process. There is a growing recognition that it is not ethically acceptable for a society to impose a radioactive waste facility on an unwilling community."*

## AUSTRALIA

Our article published by the Asia-Pacific Leadership Network covers approaches to radioactive waste management in Australia with an emphasis on attempts to clean up atomic bomb test sites as well as attempts to establish a national radioactive waste repository and storage site. We don't cover the serious challenges managing hundreds of millions of tonnes of radioactive tailings waste at uranium mines in Australia.

We first consider historical wastes associated with atomic bomb testing (and associated nuclear experiments) carried out in the 1950s and 1960s in Western Australia (Montebello Islands) and South Australia (Emu Field and Maralinga). Efforts to remediate these sites have been half-hearted, scandal-plagued and ineffective.

We then consider more recent contests to establish a national radioactive waste facility. Since the late-1990s, successive federal governments have tried and failed to establish a national radioactive waste repository. Attempts to establish international nuclear waste storage and disposal facilities in Australia have also been unsuccessful.

In addition to existing challenges, the AUKUS nuclear submarine program will generate streams of intermediate- and high-level nuclear waste requiring deep geological disposal, in addition to low-level radioactive waste. In light of the failure to manage existing radioactive waste management challenges, it must be questioned whether the Australian government can successfully manage the challenges of high-level nuclear waste management posed by the AUKUS defence pact and the plan to purchase and build nuclear-powered submarines.

## UN DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES

Australia has a long and complex engagement with nuclear waste issues. A recurring theme is the violation of the rights of First Nations peoples and their successful efforts to resist the imposition of nuclear waste facilities on their traditional lands through effective community campaigning and legal challenges.

We argue for the incorporation of the UN Declaration on the Rights of Indigenous Peoples into Australian law, and amendments to the National Radioactive Waste Management Act to remove clauses which weaken or override Indigenous cultural heritage protections and land

rights. In addition, there is a need for studies, clean-up and monitoring of all British nuclear weapons test sites in Australia in line with the obligations in the Treaty on the Prohibition of Nuclear Weapons.

In October 2023, Dr. Marcos Orellana, UN Special Rapporteur on Toxics and Human Rights made a visit to Australia, hearing from a diverse range of experts on the implications for human rights due to the management of hazardous substances and wastes. His initial report noted:

*“It is instructive that all siting initiatives by the Government for a radioactive waste repository have failed, leaving a legacy of division and acrimony in the communities. The loss of lives and songlines resulting from exposure of Indigenous peoples to hazardous pesticides in the Kimberley region, from asbestos exposure in Wittenoom in Western Australia, and from the radioactive contamination following nuclear weapons testing in South Australia, are all open wounds. Alignment of regulations with the UN Declaration on the Rights of Indigenous Peoples is a critical step in the path towards healing open wounds of past environmental injustices.”*

Of particular relevance in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) is Article 29 which states that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior, and informed consent.

Federal Parliament’s Joint Standing Committee on Aboriginal and Torres Strait Islander Affairs, in its November 2023 report on the inquiry into the application of the UNDRIP in Australia, recommended that the federal government ensure its approach to developing legislation and policy should be consistent with the Articles outlined in the UN Declaration. The Committee also recommended that a National Action Plan should be developed to implement, and assess compliance with, the Declaration. However the government has not responded to the Committee’s report as of Feb. 2025, and a National Action Plan has not been developed.

## NATIONAL RADIOACTIVE WASTE MANAGEMENT ACT

An important step towards a more democratic and more effective approach to radioactive waste management in Australia would be to amend the federal National Radioactive Waste Management Act (NRWMA). The Act sharply restricts the democratic rights of all Australians and it goes to extraordinary lengths to dispossess and disempower First Nations people. It is incompatible with a cooperative, inclusive approach to radioactive waste management.

The NRWMA permits the imposition of radioactive waste facilities even if affected First Nations people were not consulted and did not provide informed consent. The NRWMA includes clauses which nullify state/territory laws that protect the archaeological or heritage values of land or objects, including those which relate to Indigenous traditions. The Act curtails the application of Commonwealth laws including the Aboriginal and Torres Strait Islander Heritage Protection Act 1984 and the Native Title Act 1993 in the important site-selection stage. The Native Title Act 1993 is expressly overridden in relation to land acquisition for a radioactive waste facility.

## NO NUCLEAR WASTE DUMP IN THE NT



**Congratulations from everyone  
at Friends of the Earth!**



Under the NRWMA, consent for radioactive waste facilities resides solely with the federal minister. Angela Morsley, writing in the Macquarie Law Journal in 2017, notes that the absolute discretion of a minister to select a site for radioactive waste facilities comes “at the expense of matters important to the public interest, and with the consequence that the siting process is inherently compromised.”

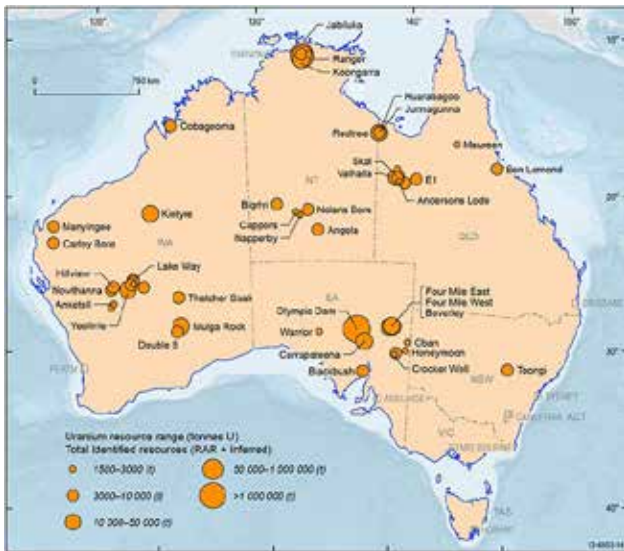
Morsley describes it as a “regime tightly shut against public participation, such that there remains little opportunity for expressions of local dissent and the testing of regionally important interests that conflict with those endorsed by the Commonwealth.”

The NRWMA should be amended to remove all clauses which dispossess and disempower First Nations peoples. It should further be amended to remove undemocratic clauses which disempower affected local communities and councils, state/territory governments and the public at large.

A wide-ranging, independent national inquiry should be established by the federal government to investigate waste management options and related issues such as legislation and regulation.

*Jim Green is the national nuclear campaigner with Friends of the Earth Australia. Dimity Hawkins is a Co-Coordinator of the Nuclear Truth Project ([nucleartruthproject.org](http://nucleartruthproject.org)) and was a co-founder of the International Campaign to Abolish Nuclear Weapons ([icanw.org](http://icanw.org)).*

Honey Nelson



Which indeed it is (no atmospheric emissions such as CO<sub>2</sub> or CH<sub>4</sub>) – until we get to the unfortunate larger truth, the messy necessity to ‘dispose’ of the *massive and deadly toxic waste-products of Uranium processing, and of nuclear reactors* (including the AUKUS submarine engines): poisonous fall-

Temporary underground concrete bunker

Since the 1940's, in North America and Europe, 250,000+ tonnes of solidified wastes are presently stored (temporarily) in aging steel or concrete drums, underground in concrete bunkers, or even abandoned in remote areas - increasing daily, and still awaiting some yet-undetermined deep



radioactive graveyard. Nobody will take it. (Finland has agreed to take a mere 3000 tonnes.)

‘Permanent disposal’ must be in deep stable geological strata, within vast excavated concrete tombs. Provided of course it can be guaranteed that the geology will remain absolutely stable for millions of years (ha ha).



US nuclear waste drums on coast of Greenland

**Intermediate and Low-level RAW:** These are generally the wastes from *technologies* of nuclear production (e.g. tools, machinery, garments, chemicals and compounds, structures etc.).

Intermediate-level radionuclides may remain toxic to life for several hundred or thousand years. Low-level wastes are toxic for about 30+ years.

These likewise must go for ‘final’ storage in deep permanent underground bunkers. A problem with their storage is corrosion, and organic degradation to gases such as hydrogen, CO<sub>2</sub> and methane, which can pressurise and force these RA gases and solutions out into the environment. Imagine the corrosions, geological shifts, cracking, ruptures, leaks, and gas releases over thousands of years...

## AUSTRALIA'S URANIUM MINES AND RADIOACTIVE WASTE TAILINGS DAMS

Australia's Uranium mines use open-cut extraction (e.g. Olympic Dam hole 4x4 km.) or in-situ acid leaching (e.g. Beverley, Honeymoon).

No First Nations or regional consent was sought for the mining, processing, and toxic waste repositories for these mines.

The processing of Uranium for export entails *fine-milling* the ore, to expose vastly more radioactivity for release. 1% of this is processed into yellowcake for export.

Incredibly, the remaining 99% dust-tailings of RA minerals and 35% of the uranium, are contained in *huge above-ground water dams* (400 ha.) suctioned from the Great Artesian Basin – 35 to 40 million litres DAILY (at Olympic Dam alone), for free, on the driest continent on Earth. These RAW dams have already leaked and spilled – during only 30-odd years.

The radioactive dust-gas Radon can and will escape from these plastic-based water-covered Uranium and waste dams, whose inhalation causes cancers and birth defects. Eventually these radioactive dusts pass into regional ground and waters, and inevitably food-chains also.

When totally full, RAW dams are to be covered with rocks (for our eternal safety).

After 1000 years (haha), we *officially eschew any legal responsibility* for the fall-out – from RA wastes still emitting 99% of their original toxicity, continuing this irradiation for many thousands of years. These stowed wastes remain subject to any number of geological, tectonic, water and climatic disturbances, for all conceivable future human generations (and small animal generations, if they've survived.)



Mine site and day-glo tailings dams at Olympic Dam uranium mine, SA.

## NO INFORMATION IS OFFERED BY GOVERNMENTS OR INDUSTRIES

Little or no public information is offered by the Australian government, industries, or media, regarding the awesome global issues of radionuclide wastes and their ‘disposal,’ whether here or elsewhere.

International pressure is (quite understandably) on Australia to take responsibility for its profiting from Uranium sales, by undertaking *disposal of vast spent-fuel RA Wastes from nuclear industries world-wide*. Of course! – we're profiteers, and we've ducked the risks until now, and we've got this big continental geology which will (of course!) obediently become absolutely inert and stable for the next million years or so....

We live in a huge sparsely populated continent, where it would be just too easy to bury the world's toxic radioactivity problem way inland there under a shimmering horizon – which is somebody's beloved Country, somebody's living history, the mother Earth's deep and precious life and water strata, the Great Artesian Basin itself, and the future survival of innumerable rare and exquisite native species (40% extinct already).

And of course, of our own beloved descendants.

20,000+ GENERATIONS: or even ONE, or TWO generations: How can we condemn our children, our descendants and all Earth life, to this permanent legacy of deadly risk and inevitable breakdown? – for our present-day, petty conveniences and profits??

*Nobody asked us*, the parents, grandparents, ancestors, and guardians of our beautiful continent's Life and future. And have we got an attitude.

# MUCKATY VOICES

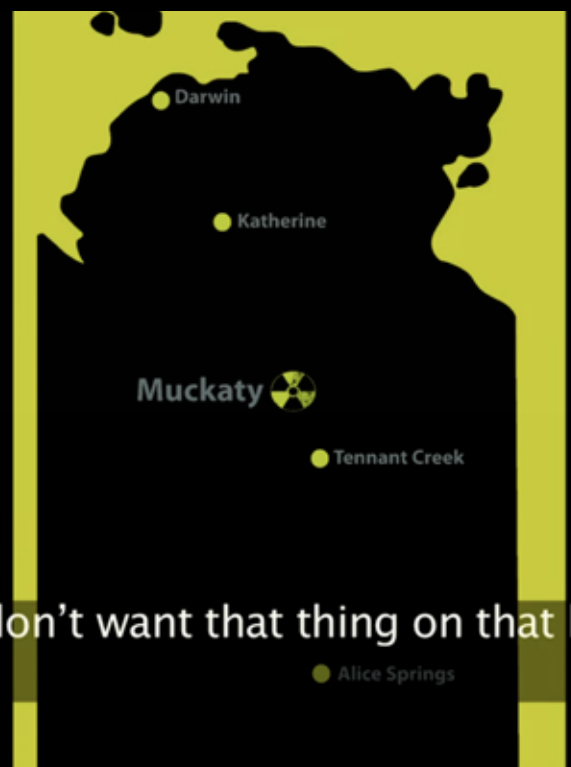
*WARNING: 'Muckaty Voices' contains images of people who have passed on.*

Muckaty Voices opened the 'Down Under' Berlin Film Festival in Sept 2011 and was a finalist in the Rio de Janeiro International Uranium Festival 2011. I made the film with Muckaty Traditional Owners north of Tennant Creek NT, where the proposed radioactive nuclear waste dump was to be located. 3000 DVD copies had already been printed. It was screened at the Legal and Constitutional Senate Inquiry into the Nuclear Waste Dump.

Watch the whole film online: <https://vimeo.com/28892065>







Produced in collaboration with Muckaty Traditional Owners and family by Beyond Nuclear Initiative (joint project of ACF, FoE and Poola Foundation-Tom Kantor Fund)

[www.beyondnuclearinitiative.wordpress.com](http://www.beyondnuclearinitiative.wordpress.com)

and Enlightning Productions- (c) Eleanor Gilbert  
film-maker [enlightningproductions@gmail.com](mailto:enlightningproductions@gmail.com)



# The SA government and BHP need to protect the Great Artesian Basin Mound Springs

David Noonan

For decades, millions of litres of Great Artesian Basin (GAB) water have been extracted daily for use at the Olympic Dam copper-uranium mine in central South Australia. That water extraction has severely impacted precious Mound Springs, oases sustained by the underlying GAB. There is now an opportunity to protect the Mound Springs, but that opportunity may be missed.

“I agree with you that the real opportunity to achieve significant beneficial environmental and cultural outcomes is to replace, or at least significantly reduce, Olympic Dam’s current extractions from the GAB with a new, sustainable water supply.”

Those were the words of Susan Close, SA Minister for Environment and Water, in a letter to me dated 18 July 2022.

Protection for unique and fragile Mound Springs<sup>1</sup> and integrity of GAB waters<sup>2</sup> can’t be left up to the undue influence of BHP, the mining giant that currently owns and operates the Olympic Dam mine. BHP’s very limited commitment is to retain its unviable Wellfield A operations and only close it by the end of fiscal year 2030 once the SA government provides a new water supply to BHP.<sup>3</sup>

The impacts of BHP’s larger scale Wellfield B water extraction operations are an untenable long-term insidious threat to the viability of Mound Spring flows. BHP wants to continue these operations.

The SA government’s Northern Water Project could provide BHP with a water supply for all envisaged mine expansion and new mining options and replace both Wellfields A and B extractions from the GAB.<sup>4</sup>

The project’s “Summary Business Case” (Feb. 2024) does recognise ongoing risks to GAB Mound Springs:<sup>5</sup>

*“The 2021 Juukan Gorge Inquiry made the following observations: ‘These springs (Mound Springs) are of great significance to the Arabana people and they are an important part of their cultural heritage. There are fears that continued extraction from the Great Artesian Basin will result in a significant reduction to the ‘vitality and the ecological viability of the springs’, and that there is a high likelihood that more springs will go extinct.’*

*“Northern Water will play a significant role in reducing reliance on the use of water supplies that hold significant cultural importance to Traditional Owners. Providing the opportunity for reduced water withdrawals from the Great Artesian Basin may play a role in preserving mound springs. As virtual oases in the desert, the springs were, and still are, of vital importance to Indigenous people.”*

However, the SA government has a serious conflict of interest in dealing with BHP. SA wants to lever and maximise an array of BHP investments in north SA and to give certainty to BHP over water supply.

BHP is to set up Olympic Dam as a regional processing hub for copper-uranium ores from multiple mine expansions<sup>6</sup> and to process ore from a major new deep underground BHP mine at Oak Dam.<sup>7</sup>

SA Labor Premier Peter Malinauskas decided the public is to pay the full capital costs for a major new marine desalination plant on Eyre Peninsula and to pay for the pipelines to deliver that water to BHP at Olympic Dam. Half of the new desal water supply, up to 130 million litres a day, is to go to mining.

The SA government claims Northern Water can have no adverse impacts, direct or indirect, on the Mound Springs and therefore excluded the Springs from the project’s federal Environment Protection and Biodiversity Conservation (EPBC) Act Referral 2023/09717.<sup>8</sup> The government claims ‘there is no ongoing degradation of the Springs’, and that the Springs have ‘stabilised’.

Thus the state Environmental Impact Assessment process regarding Northern Water does not intend to assess impacts on Mound Springs or to require conditions be set to benefit the Springs in any approval of the project.

The EIS Assessment Requirements on Northern Water give only token consideration to the fate of the Mound Springs.<sup>9</sup>

The state government does not intend to direct BHP to protect the Springs but rather to ‘incentivise’ BHP toward negotiated outcomes and sees closing Wellfield A as an important but voluntary measure by BHP. ‘Significant beneficial environmental and cultural outcomes’ may be left until last or not realised at all.

## FEDERAL POWERS

Federal environment minister Tanya Plibersek has a responsibility to protect GAB Mound Springs and can use funding leverage and the federal EPBC Act to do so. Protection for GAB Mound Springs may finally rely on gaining exercise of federal influence, responsibilities and powers, given the SA government’s conflict of interest in support of mining and BHP’s undue influence.<sup>10</sup>

Minister Plibersek can use EPBC Act powers to place Approval Conditions on Northern Water through the state EIS process to protect GAB Mound Springs as a listed EPBC Act Endangered Ecological Community.<sup>11</sup> \$65 million of 'Future Made in Australia' funds has already been put into Northern Water but the Minister not yet taken action to require protection of the GAB Mound Springs.

ABC News reported on 17 May 2024:<sup>12</sup>

*“Valuable’ resources being overdrawn: Federal Environment and Water Minister Tanya Plibersek said the project was important to provide water for “thirsty” green hydrogen production and copper development. She said the only alternatives for those industries in SA would be a continued reliance the Murray River or the Great Artesian Basin. “Both of these sources are not as reliable as they need to be for industry,” Ms Plibersek said. “But they’re also incredibly valuable environmentally and the fact that we’ve been overdrawing on these resources has led to problems both for the environment and for the communities that rely on these water resources for farming, drinking and other purposes.”*

Federal funds for Northern Water must be made conditional on closure of both Wellfields A and B. The window of influence ahead of the federal election is a key time to gain federal engagement to protect the unique and fragile Mound Springs as part of Minister Plibersek’s ‘Nature Positive’ agenda.

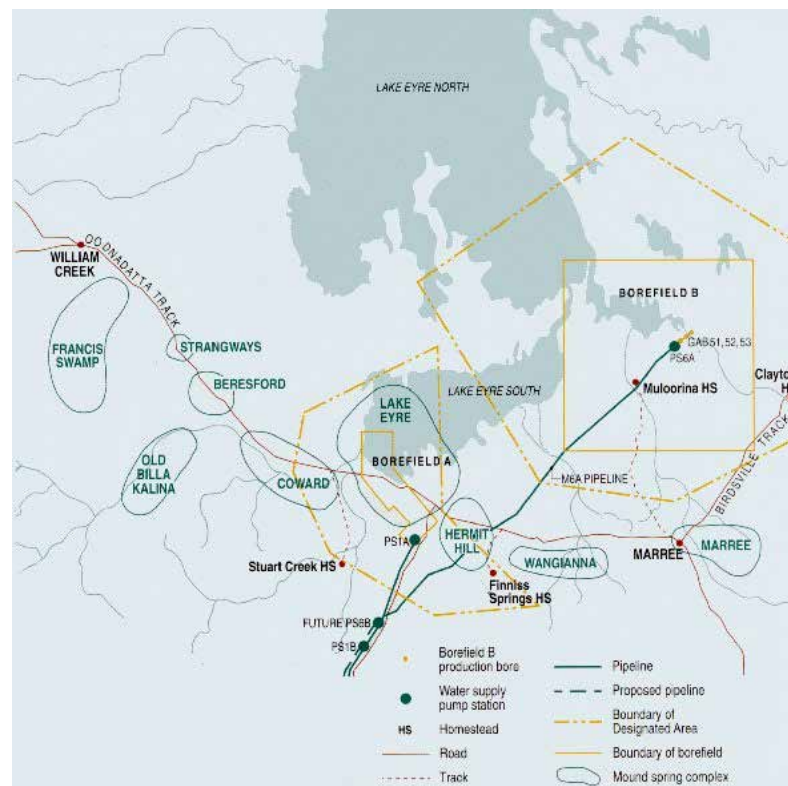
At stake are the GAB Mound Springs’ fundamental ongoing cultural and spiritual values to Indigenous People.

Social license, the SA government’s political credibility and public interest standing depend on this outcome.

Labor Premier Peter Malinauskas has tied his political fortunes in partnership with BHP<sup>13</sup> to double the scale of BHP copper mining in north SA to 650,000 tonnes a year by mid-2030s.<sup>14</sup>

As reported in *The Advertiser* on 22 Feb. 2024, the Premier looks to commit \$5 billion of public funds to Northern Water, with half the water to go to mining. Over half of the \$5 billion ‘investment’ goes to pipe desal water to BHP as world’s largest miner.

The fate of the Mound Springs must not be left up to fraught state negotiations with BHP over ‘water pricing’ as the state tries to recoup some of the \$5 billion of public funds and BHP aims to limit how much the company agrees to pay for a new water supply to be delivered to Olympic Dam.



The SA government wants to leave decisions on GAB Mound Springs until after the public Environmental Impact Assessment process on Northern Water and BHP wants to ‘hold over’ changes to Wellfield B until late in negotiations with the state.

The SA Copper Strategy<sup>15</sup> and Northern Water Project lack a social license, and a \$5 billion state and federal ‘investment’ fails contemporary public interest expectations unless the Mound Springs are protected for the long term through this opportunity to replace all BHP water extractions from the GAB.

When the first marine desal water turns up at Roxby Downs town and at the Olympic Dam mine, BHP should have to turn off the taps on GAB water extraction.

Civil society needs a concerted public interest campaign to protect GAB Mound Springs throughout 2025.

*David Noonan is an independent environment campaigner based in Adelaide.*

#### References:

1. <https://www.friendsofmoundsprings.org.au/>
2. <https://www.dceew.gov.au/water/policy/national/great-artesian-basin>
3. <https://www.bhp.com/sustainability/environment/water/shared-water-challenges>
4. [https://yoursay.sa.gov.au/northern-water?utm\\_medium=email&utm\\_source=cm\\_newsletter](https://yoursay.sa.gov.au/northern-water?utm_medium=email&utm_source=cm_newsletter)
5. [https://www.northernwater.sa.gov.au/\\_data/assets/pdf\\_file/0005/987413/240216\\_ISA\\_NWS\\_Business-Case-Summary\\_FINAL.pdf](https://www.northernwater.sa.gov.au/_data/assets/pdf_file/0005/987413/240216_ISA_NWS_Business-Case-Summary_FINAL.pdf)
6. <https://www.bhp.com/what-we-do/global-locations/australia/south-australia>
7. <https://www.bhp.com/what-we-do/global-locations/australia/south-australia/oak-dam>
8. <https://epbcpbpublicportal.ave.gov.au/open-for-comments/project-decision/?id=fd6798f9-6ddb-ee11-904c-6045bde708a5>. See also the critique endorsed by Conservation SA on this government position. <https://nuclear.foe.org.au/wp-content/uploads/Noonan-2024-sub-to-EPBC-2023-09717-Re-Impact-on-Springs-of-the-GAB.pdf>
9. [https://plan.sa.gov.au/development\\_applications/state\\_development/impact-assessed-development/majors/major\\_projects/majors/northern-water-project](https://plan.sa.gov.au/development_applications/state_development/impact-assessed-development/majors/major_projects/majors/northern-water-project)
10. <https://nuclear.foe.org.au/wp-content/uploads/Noonan-2024-sub-to-EPBC-2023-09717-Re-Impact-on-Springs-of-the-GAB.pdf>
11. <https://epbcpbpublicportal.ave.gov.au/open-for-comments/project-decision/?id=fd6798f9-6ddb-ee11-904c-6045bde708a5>
12. <https://www.abc.net.au/news/2024-05-17/northern-water-supply-project-funding-jim-chalmers/103862108>
13. <https://www.bhp.com/news/media-centre/releases/2024/08/bhp-takes-next-step-in-smelter-and-refinery-expansion-at-copper-south-australia>
14. <https://www.premier.sa.gov.au/media-releases/news-archive/significant-milestone-as-bhps-sa-copper-plan-set-for-assessment>
15. <https://nuclear.foe.org.au/wp-content/uploads/Noonan-SA-Copper-Strategy-Northern-Water-December-2024.pdf>

# Ancient Mound Springs Capping a Disaster

Mound Springs Collective

Here we stand at the lowest point of our ancient continent, in the vicinity of the endemic Mound Springs near Lake Eyre South in South Australia.

It is here wherein lies the final resting place of the million year old waters of the Great Artesian Basin (GAB). These interconnected waters have migrated over eons of time from the Highlands of New Guinea and recharge areas in the north of the Continent, permeating through porous rock, fissures, clefts, faults and underground river systems, the details of which are known through the age-old wisdom of the Traditional Knowledge Keepers.

It is here in the arrogant ways of modern man, that the Roxby Downs Uranium mine extracts up to 42 million litres of GAB water per day for its industrial complex and township situated 90ks to the South.

This lowest point of the GAB is also its southern extremity being bound by large fault zones. It is at these margins where the confined waters are forced under pressure to the surface, via vertical leakage, through a vast network of Mound Springs, the life-blood of this part of the country.

Since 1983 Roxby's enormous extraction of water from this area has now severely impacted the Mound Springs, potentially to extinction. There is no measure to signify the loss to these endemic ecosystems and the consequent impacts to birds, animals and people.

Many efforts have been made during the last 40+ years to prevent the loss that is now being incurred in this Region but, as yet, to no avail.

Recent surveys, which have been carried out since 1985 show noticeable declines in both spring flow and subsequent surface water. There is great alarm for these Mound Springs located in the vicinity of Roxby's Borefield A as well as those in a wider area with the once permanent Hergott Spring at Marree (60ks to the East) being now completely dry. The original siting of the town of Marree was reputedly based on the presence and permanence of this water source. Approximately 40 kms to the West of Borefield A, the famous 'Bubbler' mound spring has also reportedly very much declined. A Spring which at one time had artesian pressure so great as to hold a person buoyant in the spring vent. There are hundreds of once-flowing Mound Springs across this region which have now capped themselves or have become extinct.

When asked Mr. Reg Dodd, Arabunna elder and Traditional Owner of Arabunna country, has no doubt that the drying up of the Springs, including those at Hergott Springs and the Bubbler, are a direct consequence of Roxby's Borefield activities.

It has also been surmised that, via a cone of depression, the effect of the drawdown of the water table from Roxby's Borefields A and B activities, is dewatering the interconnected GAB as far away as NSW and Queensland.

It is important to remember that this area of Mound Springs was once nominated for World Heritage due to its unique and precious environmental and cultural values. The loss of this vital natural resource is a tragedy to the people of the Region and also a reflection of the seriousness of Roxby's impacts on the GAB.





## **WE ARE CALLING FOR AN IMMEDIATE CESSATION OF WATER EXTRACTION FROM BOREFIELD A,**

which is the immediate Wellfield impacting the Mound Springs near Lake Eyre South and seek further investigation by both State and Federal governments into the impacts resulting from the even greater extraction rates from Roxby's Borefield B to the northeast.

*Water is Life. We must defend the natural elements that support the Mound Springs and all life in this area.*

People are still out at Alberrie Ck., maintaining a presence and up-grading the infrastructure at the old Railway House. People are encouraged to make contact with the Arabunna Centre and to assist where you can in monitoring Roxby's Borefield activities.

## **FOR ENQUIRIES ABOUT THE MOUND SPRINGS PLEASE CONTACT:**

Mound Springs Collective.

Annie McGovern 0427500641

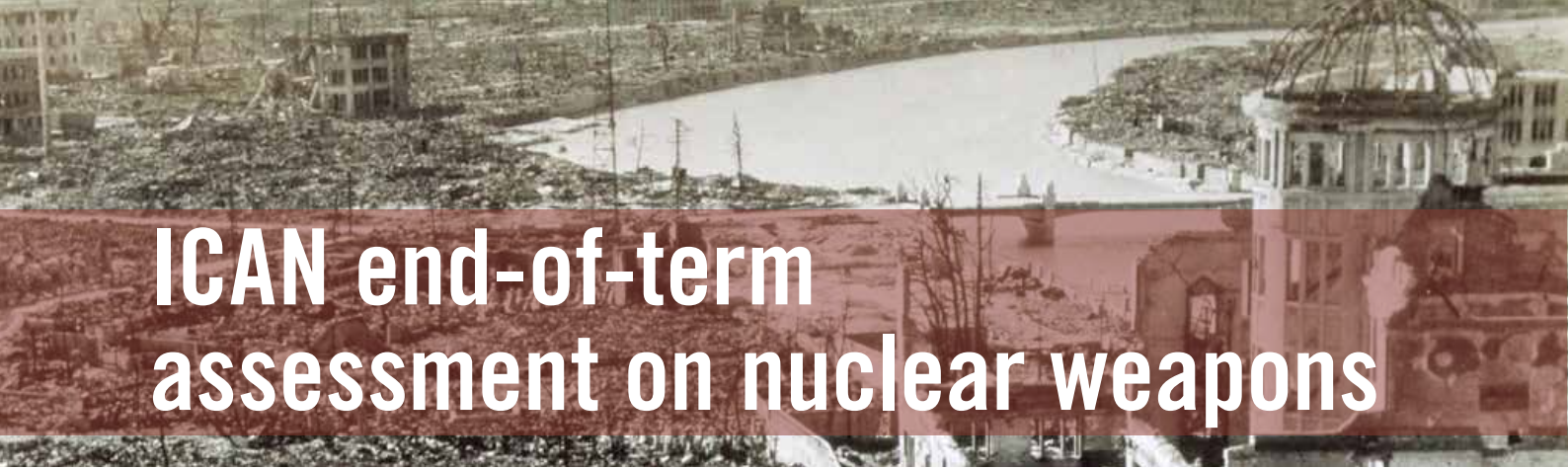
Mr. Reg Dodd, Arabunna Elder

at Arabunna Centre, Marree, South Australia

[reg.dodd@gmail.com](mailto:reg.dodd@gmail.com)







# ICAN end-of-term assessment on nuclear weapons

International Campaign to Abolish Nuclear Weapons

Here is an assessment of the Albanese government's record on nuclear weapons.

For a detailed, referenced version of this assessment, please visit [icanw.org.au/ican-end-of-term-assessment](https://www.icanw.org.au/ican-end-of-term-assessment)

## POSITIVES:

- The Australian Labor Party recommitted to signing and ratifying the Treaty on the Prohibition of Nuclear Weapons (TPNW) at its National Conference in August 2023.
- The Government attended the first and second Meetings of States Parties to the TPNW as an observer, with Susan Templeman MP leading each delegation.
- The Government formally ended its opposition to the TPNW by abstaining on the TPNW resolution at the UN General Assembly in 2022-24.
- The Government voted "Yes" on the UN General Assembly resolution to set up a scientific study of the effects of nuclear war in 2024.
- The Government voted "Yes" on the UN General Assembly resolution on nuclear weapons victim assistance and environmental remediation in 2023.
- Positive sentiments expressed that underscore Australia's "solemn recognition of the devastating consequences of nuclear war" and "redoubling [its] efforts to achieve a world free of nuclear weapons".
- Continued support for the Comprehensive Nuclear Test Ban Treaty, to which Australia is a party, and a proposed fissile material cut-off treaty, which would ban the production of fissile material for nuclear weapons (but not for nuclear propulsion or other purposes).

## NEGATIVES:

- Despite Labor's longstanding policy commitment, the Albanese Government has failed to progress signature and ratification of the TPNW.
- The Australian Government has progressed plans to acquire submarines fuelled with weapons-grade highly-enriched uranium under the AUKUS agreement, a major risk to nuclear non-proliferation and the nuclear Non-Proliferation Treaty safeguards regime.
- Australian Defence Force plans to host six American B-52 aircraft at RAAF Tindal in the NT, with upgraded facilities and support to enable a more permanent presence. Around half of the US B-52 fleet are nuclear-capable. Unless nuclear-capable B-52s are excluded, this would, for the first time, mean that nuclear weapons could be deployed from Australia.

Hiroshima after the atomic explosion. The 'A-dome' is seen on the right-hand side.

- Australia's national security policy continues to claim protection by the US nuclear arsenal under the doctrine of "nuclear deterrence", thereby supporting the threat and potential use of nuclear weapons, with command, control, targeting and increasingly, logistical assistance from facilities on Australian soil.
- Australia again abstained on the UN General Assembly resolution on the humanitarian impacts of nuclear weapons due to specific language, suggesting there are circumstances in which the government believes use of nuclear weapons is justified.

## NUCLEAR SUBMARINES

The Albanese Government chose to endorse the Morrison Government's controversial agreement to acquire nuclear-powered submarines as part of the AUKUS pact.

The submarines that Australia intends to purchase, and subsequently produce, utilise weapons-grade highly-enriched uranium (HEU). The acquisition of such material by a non-nuclear weapons state exploits a never-before-used section in the nuclear Non-Proliferation Treaty, making it easier and more likely other nations will follow suit.

This weakens the global non-proliferation and safeguards regime by opening up the possibility of increased production, use and diversion of the fissile materials from which nuclear weapons can be made, and undermines the spirit of the Non-Proliferation Treaty.

## RECOMMENDATIONS FOR THE 48TH AUSTRALIAN PARLIAMENT

- Sign the UN Treaty on the Prohibition of Nuclear Weapons during the next term of government. This will pave the way for the negotiations to bring Australia to a position of compliance with TPNW obligations and enable ratification of the Treaty.
- Require disclosure and disallow any foreign military aircraft or vessel that is carrying nuclear weapons, or is nuclear-capable, to transit, visit, rotate through or be based in Australian territory, airspace or waters.
- Cancel the acquisition of HEU-fuelled nuclear submarines.
- There should be no direct or indirect Australian involvement or support for our allies' nuclear operations, including through targeting, command and control, re-fuelling, maintenance and repair, overflight, accompanying flights, and Airborne Warning and Command System support. Australia's plans and policies should support and not undermine nuclear non-proliferation and disarmament.

# **STOP URANIUM MINING**

**Movement Against Uranium Mining  
People for Nuclear Disarmament**



# AUKUS

## – the Front Line

Chris Johansen

As of now, AUKUS remains largely aspirational. Australia's purchase and building of nuclear-powered submarines is slated for subsequent decades, rotational porting of US and UK nuclear submarines in Australia is not intended to ramp up until 2027 and the plans for military technology development under AUKUS Pillar 2 area are still on drawing boards.

But on the ground, things are happening. The base for Australia's nuclear-powered submarines, and for rotational stays and maintenance of US and UK nuclear subs, is the existing HMAS Stirling Naval Base, on Garden Island, bordering Cockburn Sound, to the south of Fremantle (not to be confused with Garden Island naval dockyards in Sydney Harbour).

HMAS Stirling is now a component of Submarine Rotational Force – West (SRF-West), responsible for nuclear submarine rotations. The Australian Submarine Agency (ASA), which is responsible for “delivering the AUKUS Optimal Pathway”, has been trying, for over a year, to gain social licence from the local councils adjacent to Cockburn Sound and their citizenry (having noticed some local unease about AUKUS).

With the passage of the Australian Naval Nuclear Power Safety Bill in October 2024, and clearance from the Australian Radiation Protection and Nuclear Safety Authority (ARPANSA), permission to proceed with upgrading docking facilities, expanding housing and building a nuclear waste repository (deceptively called a “Controlled Industrial Facility”, presumably to deflect anti-nuclear sentiments) at SRF-West is now granted. But we are unable to report on actual work progress as the area is, of course, restricted to the public.

Further, in October 2024, it was confirmed that dry docking facilities for nuclear-powered submarines would be developed at Henderson, on the mainland across Cockburn Sound from Garden Island.

### CONTESTING AUKUS

I would like to highlight the efforts of those in the West who are opposed to AUKUS, one might say vehemently. Led by Stop AUKUS WA (SAWA)<sup>1</sup> and Nuclear Free WA (NFWA)<sup>2</sup>, but supported by various other progressive organisations.

There are two broad categories of criticism against AUKUS – the national-global implications, and the local implications for people living on the mainland opposite HMAS Stirling.



Anti-AUKUS demonstration at the gates of HMAS Stirling Naval Base, October 2024. Photo by Chris Johansen.

Readers of this magazine would be well aware of the adverse global implications, eloquently elaborated by former Labor luminaries such as Paul Keating<sup>3</sup>, Gareth Evans<sup>4</sup> and Bob Carr<sup>5</sup> – and even Malcolm Turnbull is not happy.<sup>6</sup> A forensic analysis of the genesis of AUKUS and its implications is given by Andrew Fowler in his book “Nuked”<sup>7</sup>.

The major adverse consequences of AUKUS from a national-global perspective are:

- Confirming Australia as a proxy state of the USA, with non-negotiable obligations to follow the USA into whatever wars it declares.
- AUKUS is clearly aimed at the US objective of containing China; rather damaging to Australia as China is our biggest, and likely prospective, trading partner.
- Australia's inevitable breaching of the Nuclear Non-Proliferation Treaty.
- Alienation of Asian country neighbours by harking back to an Anglophile alliance with domination of Asian countries via military might as its aim.
- Nuclear-powered submarines are designed for long-distance deployment – in this case for sitting off the coast of China in intimidatory fashion – but totally unsuited for coastal defence of Australia, as the existing Collins Class submarines were intended to do.
- And the cost – estimated at A\$368 billion – with no cost-benefit analysis of how that money could be better spent.

SAWA and NFWA have been making submissions to various enquiries and testifying to relevant Senate committees, mainly concerning these national-global issues. But we have our hands full in addressing the various local issues, which can be categorised as follows.

### 1. RADIOACTIVE WASTE

The “Controlled Industrial Facility” (CIF) is claimed to be a repository for low-level waste (LLW) only, derived from repair and maintenance of nuclear submarines. The ASA claims that this LLW would be similar to hospital and research radioactive waste, containing isotopes of short half-life and low radiation intensity. However, the relative harmlessness of LLW from nuclear submarines has been questioned.<sup>8</sup>

The potency of this nuclear submarine radioactive waste can only be assessed if we know the identity, quantity and form of the isotopes involved – likely to remain “top secret” information.

The CIF is claimed by Defence to be for “temporary” storage, with transfer to a permanent storage site once it is established. This is an inadvertent admission that long half-life isotopes are involved. It needs to be pointed out that after 60 years of trying, no long-term storage site for hospital and research radioactive waste has been identified in Australia (residents at potential sites have so far successfully objected).

Other concerns about accidental escape of radioactivity include transport procedures of waste from Henderson to CIF or from CIF to a permanent site (when identified), natural disasters (e.g. the site of the CIF is near the ocean just a few meters above sea level), initial inexperience of Defence personnel in handling radioactivity, and the universal reluctance of military authorities to inform the adjacent public of internal accidents in a timely manner.

## 2. ENVIRONMENT IMPACTS

The unique ecology of Cockburn Sound and adjacent land would be threatened by the intended dredging and enhanced risk of escape of radioactivity. That risk will indeed be enhanced when container ships share the same route with nuclear submarines through Cockburn Sound, as it is planned to build WA’s main container port just opposite HMAS Stirling. And, we are not aware of any realistic attempt to negotiate with First Nations owners concerning cultural sites in the region.

## 3. SOCIAL IMPACTS

It is intended to build 550 new households for Defence personnel associated with AUKUS, including some 700 US personnel and families, on Garden Island and in adjacent mainland suburbs. Defence argues this would be a boon to the local building industry.

However, it would divert building activity from domestic needs in an area with housing shortages and homelessness. Further, there is currently a lack of skilled building workers to meet existing local needs let alone additional Defence needs. Also, major disruptive roadworks would be required to improve access to HMAS Stirling and Henderson, and between those locations.

## 4. HMAS STIRLING AS A MILITARY TARGET

The obvious purpose of AUKUS is preparation for a US war with China, with Australia being a major launch pad. Should that eventuate, HMAS Stirling would automatically become a prime target, along with Pine Gap, Tindal air base and North-west Cape communications facility. Although this is scoffed at, there is a precedent. The other Garden Island, in Sydney Harbour, was attacked by Japanese midjet submarines during World War 2, it being a major base for the US Navy then.

## LOCAL ANTI-AUKUS ACTIVISM

In addition to petitions, submissions, meetings with politicians and participating in senate enquiries, mainly concerning national issues, local anti-AUKUS activism in WA is targeting local councils adjacent to Cockburn Sound, emphasising the local issues mentioned above. This is done through meetings with mayors and councillors, petitions and questions to councils, and demonstrations at any local pro-AUKUS events.

The general reaction of councils so far is that these matters are beyond their jurisdiction but lie with the Department of Defence or the federal or state governments. However, we argue that many facets do fall within the realm of council responsibility. These include establishment of local safety and emergency procedures in case of a radioactive leakage event, educating their residents accordingly, dealing with the housing and infrastructure changes implicated by AUKUS and preparing for the inevitably adverse social fallout of the intended influx of mainly US naval personnel.

Anti-AUKUS lobbying of councils has been countered by the Department of Defence by sending mayors and CEOs of affected councils on a junket to the USA in September 2024, albeit funded by respective council ratepayers.

The object was to demonstrate how bases for nuclear warships in the USA comfortably integrate with local communities and how social licence is maintained. Thus, trying to guide councils on how to gain and retain social licence around Cockburn Sound. Actually, quite a different situation in the USA where bases for nuclear warships have operated for many decades.

Hence the Department of Defence and organisations such as SAWA and NFWA are in a battle for hearts and minds of the citizens living in the vicinity of Cockburn Sound. Of course, anti-AUKUS activists are up against strong AUKUS support provided by state and federal governments and mainstream media but we are determined to prevent any issuance of a social licence.

It may be noted that the nuclear-powered submarine program has essentially been relegated to South Australia, for eventual construction of nuclear submarines, and WA, as the home port. Well away from east coast cities where social licence would likely be harder to achieve.

Thus WA is currently at the front line, but we would very much appreciate the support of anti-nuclear activists in the east. We don’t expect you to trek across the Nullarbor carrying anti-AUKUS placards but would be uplifted by your online support.

*Chris Johansen is a member of Stop AUKUS WA and Nuclear Free WA.*

### References

1. [www.facebook.com/search/top?q=stop%20aukus%20-%20wa](https://www.facebook.com/search/top?q=stop%20aukus%20-%20wa)
2. <https://nuclearfreewa.com/>
3. [www.abc.net.au/news/2023-03-15/paul-keating-anthony-albanese-penny-wong-aukus-nuclear-china/102098142](https://www.abc.net.au/news/2023-03-15/paul-keating-anthony-albanese-penny-wong-aukus-nuclear-china/102098142)
4. <https://theconversation.com/gareth-evans-aukus-is-terrible-for-australian-national-interests-but-were-probably-stuck-with-it-236938>
5. [www.thenewdaily.com.au/news/politics/australian-politics/2024/04/18/bob-carr-aukus](https://www.thenewdaily.com.au/news/politics/australian-politics/2024/04/18/bob-carr-aukus)
6. [www.smh.com.au/politics/federal/malcolm-turnbull-questions-whether-sick-british-economy-can-sustain-aukus-20230316-p5cslm.html](https://www.smh.com.au/politics/federal/malcolm-turnbull-questions-whether-sick-british-economy-can-sustain-aukus-20230316-p5cslm.html)
7. Fowler, A. Nuked. Melbourne University Press. 2024
8. [www.mapw.org.au/flawed-and-misleading-doctors-decry-nuclear-waste-process/](https://www.mapw.org.au/flawed-and-misleading-doctors-decry-nuclear-waste-process/)

# AUKUS ‘impact assessment’ report ignores nuclear submarine risks in SA

David Noonan

Environment Minister Tanya Plibersek has released an EPBC Act ‘Impact Assessment Report’ (IAR) to address the impacts of constructing nuclear submarines at Osborne, Port Adelaide.

A deluge of documents – the 200-page IAR with 750 pages of appendices – have been released for ‘public consultation’ running till March 17.

However, the IAR fails to provide answers to community’s ‘right to know’ on nuclear submarine accident risks and radioactive waste storage facing Port Adelaide.

Federal Labor ruled a range of lead community concerns as “out of scope” of this assessment. The IAR says: “Information on potential sources of radiation has been provided to inform, however does not form part of the Strategic Assessment as these sources will be managed via separate environmental assessment processes and approvals as necessary.”

Impacts of commissioning and operation of the ‘power module’ (the nuclear reactor) “is considered outside the scope of this assessment” – that assessment is to be ‘held over’ for a new non-independent military nuclear regulator that reports to Defence Minister Richard Marles.

The military are to effectively take over public safety at Port Adelaide even though the federal Health Minister Mark Butler is the local MP.

Federal Labor are in denial over nuclear submarine reactor accident risks. The word ‘accident’ does not even appear in the 200-page IAR. This is a multi-year failure to study and make public nuclear accident emergency response measures and evacuation plans at Osborne.

Even a visit by a nuclear-powered submarine to a port in Australia requires emergency response planning that sets evacuation zones for potential nuclear reactor accidents.

It is disrespectful and at best inept to decide to impose nuclear accident risks onto communities across Lefevre Peninsula and Port Adelaide while only conducting partial impact assessments and limiting ‘public consultation’ to only those aspects that suit Labor’s staged roll-out of the AUKUS nuclear submarine agenda.

Further key health and safety issues are excluded from this federal public consultation.

The IAR says: “No nuclear actions are included within the Actions or Classes of Actions of the Plan.” The proponent, the Australian Submarine Agency, is to conduct

a separate ‘Environmental Radiological Assessment’ to license impacts at Osborne.

The management facility for radioactive waste at Osborne, and the disposal pathway for such radioactive waste, “is considered outside the scope of the Strategic Assessment”.

Defence Minister Marles is already a year late on his own schedule to announce a ‘process’ for managing AUKUS nuclear waste storage and disposal, due back in March 2024.

The IAR radioactive waste management section says: “The facility is to be designed to have the capacity to manage radioactive material over the 50-year Strategic Assessment timeframe.” Thus, radioactive wastes may accumulate and remain ‘stored’ at Osborne for decades.

The IAR also misrepresents nuclear submarine reactor radioactive wastes to be stored at Osborne as “similar to those that occur in over 100 locations nationwide, including hospitals, science facilities and universities” and “similar to the waste generated by hospitals and research facilities around Australia”.

## THE SA STATE LABOR GOVERNMENT ALSO IN NUCLEAR DENIAL

In parallel the South Australian government has also released a “Submarine Construction Yard Environmental Impact Statement” (EIS) for ‘public consultation’ up to March 17.

This EIS for the Osborne Submarine Yard concludes ‘no significant effects’ on community wellbeing – but fails to release nuclear accident studies.

The EIS claims “there is no risk to people or the environment of radiation exposure” from the on-site testing of ‘nuclear-powered propulsion systems’ at Osborne.

The EIS concludes there is no danger to people or property across an ‘immediately impacted community’ who live or work in North Haven, Largs Bay and Semaphore; or in the ‘wider community’ within Greater Adelaide who it is said ‘may feel some real or perceived broader impacts’.

These claims and concocted conclusions derive from an abject failure to recognise the effects and impacts of a potential nuclear submarine reactor accident, with required evacuation zone planning. The word ‘evacuation’ appears three times in the 400-page EIS – all to do with flood risks not reactor risks!



Why have key public safety accident studies still not been made public? The EIS says that it has assessed “the process to transport, receive, secure, store, install, test and commission a nuclear-powered propulsion system” and “radiation exposure pathways to workers, the public and non-human biota during construction and operation (including incident scenarios)”.

The EIS admits: “A loss of fuel element integrity within the power unit, while highly unlikely, could result in a radiological release direct ... into the atmosphere”. The EIS cites “a number of scenarios that could lead to a radioactive release from the Power Unit have been extensively modelled by the NSRP Design Authority” – but fails to make these studies public. Such ‘incident scenarios’ sound like nuclear reactor accidents.

In trying to get sign-off on the submarine works at Osborne it is unacceptable for the SA Labor to still fail to consult the public on required nuclear emergency response measures including required evacuation zone planning.

This EIS does assess the generation and storage of federal AUKUS radioactive wastes at Osborne but concludes: “No significant waste management effects have been identified”. The EIS cites a ‘low-level’ radioactive waste category that can require waste isolation for up to a 300-year period.

The EIS further admits: “Loss of control of any liquid or solid waste could result in the release of radioactive material and therefore pose a hazard to individuals and the environment. ... An aquatic release into the Port River could result in a wider spread of contamination, and would be dependent on quantity of the release and the tidal flow at the time of the release.”

## EMERGENCY SERVICES WORKERS HAVE A ‘RIGHT TO KNOW’

SA emergency services workers – first responders, the police, fire, ambulance and hospital personnel – have a right to know what risks they face.

Federal emergency provisions apply in event of a nuclear submarine reactor accident at Port Adelaide. The civilian Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) ‘Guide for Radiation Protection in Emergency Exposure Situations’ and ‘Nuclear powered vessel visit planning’ set out the studies and Emergency response measures that are to be put in place.

The ARPANSA Guide authorises very high ionising radiation dose exposures to emergency workers in tasking them to undertake “urgent protective actions” on site at a nuclear accident, at a dose of up to 50 milliSieverts (mSv). That is 50 times in excess of the recommended civilian maximum allowed dose of 1 mSv per year.

Federal and SA Labor governments have failed to inform community that affected members of the public within an “Urgent Protective Action Zone” of 2.8 km radius from the site of a nuclear submarine reactor accident also face authorised high ionising radiation dose exposure of up to 50 mSv. In a “Reference Accident” the local population may face evacuation and may require ‘decontamination’ and medical treatment.



A wider zone where “the surrounding population may be subject to hazards” is described as having a radius of several kms. In the UK this wider zone of emergency response measures can extend out to 5 km.

ARPANSA and Defence also require studies of a local population out to 15 km from a nuclear submarine mooring.

## CATASTROPHIC CONDITIONS

In an even more severe AUKUS nuclear accident, federal provisions provide for civilian SA emergency workers to face “the development of catastrophic conditions”.

SA emergency workers and designated shipyard workers are then to be called upon to ‘volunteer’ to risk dangerously high ionising radiation dose exposures of up to 500 mSv.

The ARPANSA Guide states female emergency workers are to be excluded: “female workers who might be pregnant need to be excluded from taking actions that might result in an equivalent dose exceeding 50 mSv”.

The ARPANSA Guide authorises “actions to prevent the development of catastrophic conditions” by civilian workers.

‘Category 1 Emergency workers’ may “receive a dose of up to 500 mSv”, a dangerously high ionising radiation dose exposure that is 500 times the maximum allowed civilian annual dose. The ARPANSA Guide states:

*“Emergency workers may include workers employed, both directly and indirectly, by an operating organisation, as well as personnel of response organisations, such as police officers, firefighters, medical personnel, and drivers and crews of vehicles used for evacuation. ...*

*“Emergency workers undertaking mitigatory actions and urgent protective actions on-site, including lifesaving actions, actions to prevent serious injury, actions to prevent the development of catastrophic conditions that could significantly affect people and the environment, and actions to prevent severe tissue reactions. ... They may also receive a dose of up to 500 mSv for life saving actions, to prevent the development of catastrophic conditions and to prevent severe tissue reactions.”*

Federal and SA Labor governments have a responsibility to prepare and resource a required ‘Emergency Response Plan’ for AUKUS nuclear reactor accidents, and to be transparent and fully inform community in advance of decisions.

No government can claim to have a social license for AUKUS nuclear submarines while failing to inform affected community and affected workers of the nuclear accident and ionising radiation health risks they may face.

David Noonan is an Adelaide-based independent environment campaigner.

Many of David’s briefing papers and submissions are online at [nuclear.foe.org.au/nuclear-subs](http://nuclear.foe.org.au/nuclear-subs)





# Friends of the Earth Australia Contacts

## NATIONAL LIASON OFFICERS

nlo@foe.org.au

## INTERNATIONAL LIASON OFFICERS

ilo@foe.org.au

## MEMBERSHIP

foe@foe.org.au

## FINANCE

finance@foe.org.au

## WWW.FOE.ORG.AU

## MEMBER GROUPS

FoE Adelaide

Bridgetown Greenbushes -  
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