

URANIUM MINING IN AUSTRALIA

Friends of the Earth, Australia
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With Australia holding 30-40% of the world's known conventional uranium reserves, the uranium mining industry hopes to significantly increase production. However the Coalition government, in power from 1996-2007, succeeded in establishing only one new mine. The Beverley mine in South Australia began commercial production in 2001. The tiny Honeymoon mine in SA began production in 2011 but in May 2012 joint venture partner Mitsui announced that it was withdrawing from the Honeymoon project as it "could not foresee sufficient economic return from the project."

As at January 2013, there is bipartisan support for uranium mining at the federal level and in SA and the NT. In Queensland, a long-standing ban on

uranium mining was overturned in 2012. In WA, the Liberal government supports uranium mining but the Labor opposition opposes any new uranium mines (but might permit mines that have received prior approvals). In NSW, the Liberal government supports uranium exploration but has not (yet) moved to permit uranium mining.

A 2003 report by a federal Senate References and Legislation Committee found "a pattern of under-performance and non-compliance" in the uranium mining industry. It identified many gaps in knowledge and found an absence of reliable data on which to measure the extent of contamination from the uranium mining industry, and it concluded that changes were necessary "in order to protect the environment and its inhabitants

from serious or irreversible damage". The committee concluded "that short-term considerations have been given greater weight than the potential for permanent damage to the environment".

The environmental and public health problems don't end at the mine sites. Australian uranium is converted into high-level nuclear waste in nuclear power reactors around the world, yet there is still not a single permanent repository anywhere in the world for the disposal of high-level nuclear waste.

The uranium mining industry has a poor track record in its dealings with Aboriginal Traditional Owners. Aboriginal and environmental groups have formed the Alliance Against Uranium to co-ordinate efforts to end this pattern of 'radioactive racism'. The tactics used by uranium mining companies against Aboriginal communities include: ignoring the concerns of Traditional Owners insofar as the legal and political circumstances permit; divide-and-rule tactics; bribery; 'humbugging' Traditional Owners (exerting persistent, unwanted pressure); providing Traditional Owners with false or misleading information; and threats, most commonly legal threats.

A May 2006 Newspannoll of 1200 Australians found that 66% oppose new uranium mines compared to just 22% in favour.

The repeatedly-demonstrated connection between 'peaceful' nuclear programs and nuclear weapons is undoubtedly a major reason for the strong public opposition. A survey carried out in 2005 by the International Atomic Energy Agency (IAEA) found that 56% of Australians consider the Agency's 'safeguards' inspection system to be ineffective. Small wonder — the IAEA itself has acknowledged "vulnerabilities" in its "fairly limited" safeguards system. Yet this is the system that we rely on to prevent the use of Australian uranium in nuclear weapons.

Australia's uranium exports have resulted in the production of over 120 tonnes of 'reactor grade' plutonium — enough to build 12,000 nuclear weapons. Successive Australian governments have been willing to sell uranium to nuclear weapons states, states refusing to ratify the Comprehensive Test Ban Treaty, states blocking progress on a Fissile Material Cut-Off Treaty, states with a

history of secret nuclear weapons research, and states stockpiling 'civil' plutonium.

Non-proliferation objectives are subordinated to corporate profits. This pattern was identified by Labor Party researcher Mike Rann, who noted in 1982 that: "Again and again, it has been demonstrated here and overseas that when problems over safeguards prove difficult, commercial considerations will come first." Ironically, Rann later became a vocal proponent of uranium mining in his capacity as the Premier of South Australia.

The claim that Australia's uranium exports are subject to the most stringent safeguards of any uranium exporting country is false. There are some useful clauses in the bilateral agreements which the Australian government negotiates with uranium customer countries, such as requirements for prior consent before reprocessing — but permission to reprocess spent fuel (thereby separating plutonium) has never once been denied even when it leads to plutonium stockpiling.

Uranium accounts for just 0.21% of Australian export revenue (2010-11 figure) and 0.02% of Australian jobs (1760 jobs).

Roxby Downs (a.k.a. Olympic Dam)

Roxby Downs (also known as Olympic Dam) in South Australia is by far the largest uranium deposit on earth. Although the uranium is low-grade, the volume is staggering, amounting to about 30% of the world's known conventional reserves. The mine has been operating since the late 1980s and is owned by BHP Billiton. Currently an underground mining method is used, using explosives to fragment the ore body. The mine produces uranium, copper, gold and silver. BHP has not been required to study the viability of mining copper, gold and silver without also extracting and selling uranium. The deposit contains a huge quantity of rare earths but BHP Billiton has shown no interest in extracting and selling rare earths.

BHP planned a massive expansion of Olympic Dam but abandoned that plan in August 2012, citing economic factors including the low uranium price. Later in 2012, BHP disbanded its uranium division and sold the Yeelirrie uranium lease in WA for about 7% of the nominal value of the uranium resource.

The SA Roxby Downs Indenture Act overrides key South Australian legislation including the Environment Protection Act, the Water Resources Act and the Freedom of Information Act.

Tailings are stored above ground at Roxby Downs. The tailings dump currently amounts to about 100 million tonnes, growing at 10 million tonnes annually. Serious questions over the long-term management of these tailings remain unanswered. Stroboscopes and other methods are used to prevent birds drinking toxic liquid tailings, but large numbers of bird deaths are sometimes recorded.

On March 10, 2006, The Australian newspaper reported on documents obtained under Freedom of Information legislation. The documents, written by scientific consultants to BHP, state that the mine needs urgent improvements in radioactive waste management and monitoring. They call on government regulators to "encourage" changes to the tailings management, noting that radioactive slurry was deposited "partially off" a lined area of a storage pond thereby contributing to greater seepage and rising ground water levels.

The mine's daily extraction of over 30 million litres of water from the Great Artesian Basin has adversely impacted on the fragile ecology, including unique Mound Springs fed by the underlying basin. In addition to artesian basin water, BHP and the SA government plan to build a desalination plant to provide more water for the proposed mine expansion.

One particularly notorious incident in the history of the Roxby mine concerned the laying of a water pipeline on the land of Arabunna Traditional Owners in the mid-1990s, when WMC Resources owned the mine. The dispute over the pipeline led to violence, terrorism, imprisonment, and the death of one person. Jan Whyte and Ila Marks summarised the controversy in the July 1996 edition of the Friends of the Earth magazine, Chain Reaction:

"It appears that WMC has embarked on a course of side-stepping consultation with the Arabunna as the traditional custodians. It has also taken similar actions in regard to the Kokotha, the traditional custodians for the actual mine site. One method used by mining companies to side-

step proper consultation processes is documented in North America and Canada as well as Australia. Mining companies incorporate small Aboriginal groups in areas under dispute and give them financial support. These groups are then regarded as the official representatives for that area and mining companies proceed to consult with them. Thus, it seems as if the companies are going through the correct legal processes whereas, in fact, they are ignoring parties who have legitimate interests."



Bubbler Mound Spring

Ranger

The Ranger uranium mine in the Northern Territory (NT) is operated by Energy Resources of Australia (ERA), majority owned by mining giant Rio Tinto. Operational since 1981, Ranger is nearing the end of its life. During the negotiating process for Ranger, the Mirarr Traditional Owners were told their opposition "shall not be allowed to prevail".

Ranger is located in an excised area amongst Kakadu's extensive wetlands, a system of floodplains, swamps, estuaries, mangroves and mudflats. Seasonal flooding underlines concerns about leaks and spills into waterways still used as a traditional food source. In the 1998-99 wet season, high uranium concentrations in water discharged into the Coonjimba and Magela Creeks was discovered. Contaminated water was released into the creeks for three subsequent seasons before the problem was addressed.

Between December 1999 and April 2000, an estimated two million litres of tailings water containing high levels of manganese, uranium and

radium escaped from a broken pipe and the Restricted Release Zone. ERA failed to comply with its reporting responsibilities.

The mine has generated over 30 million tonnes of tailings waste, and there have been more than 120 documented leaks, spills and licence breaches since the mine opened.

One incident which attracted widespread attention occurred in 2004, where 150 workers were exposed to drinking water containing uranium levels 400 times greater than the Australian safety standard. ERA was fined \$150,000 — a rare example of a uranium mining company being prosecuted for breaching operating conditions.

Yvonne Margarula, Mirarr Senior Traditional Owner, wrote in a 2005 submission to a parliamentary uranium inquiry:

"Along with other Aboriginal people the Mirarr opposed uranium mining when the Government approached us in the 1970s. The old people were worried about the damage mining would do to country and the problems that mining would bring for Aboriginal people. The Government would not listen and forced the Ranger uranium mine on us, but the old people were right and today we are dealing with everything they were worried about. Uranium mining has completely upturned our lives – bringing a town, many non-Aboriginal people, greater access to alcohol and many arguments between Aboriginal people, mostly about money. Uranium mining has also taken our country away from us and destroyed it – billabongs and creeks are gone forever, there are hills of poisonous rock and great holes in the ground with poisonous mud where there used to be nothing but bush. I do not like visiting the Ranger mine and seeing what has happened to my father's country. Although the uranium mining at Ranger is taking place on Mirarr country, overall we have not truly benefited from the mine. Mining and millions of dollars in royalties have not improved our quality of life. ...

"None of the promises last but the problems always do."

Jabiluka

In 2005, ERA announced it would continue milling at the Ranger deposit by reducing the grade classification it will process. It is expected that milling of ore could extend to 2020. For ERA, one benefit of extending the life of the Ranger mine is that it 'buys time' in relation to the nearby Jabiluka deposit. The Mirarr have a veto over the development of Jabiluka, so ERA hopes that Mirarr opposition to mining at Jabiluka will be dropped at some stage while the Ranger mine is still in operation.

The 1997-2002 push by the federal government and ERA to build the Jabiluka mine was defeated by an extraordinary mass movement led by the Mirarr. However, the Jabiluka deposit is large and lucrative and the Mirarr will face unrelenting pressure for some years to come.

The Mirarr have lodged a native title claim over mining service town Jabiru. In March 2006, Andy Ralph, chief executive of the Mirarr representative body Gundjehmi Aboriginal Corporation, revealed that the federal government has used the claim to pressure the Mirarr to reverse its opposition to mining at Jabiluka. Ralph says that the Government consistently implies, "we will give you Jabiru, just give us Jabiluka".



Beverley

Heathgate Resources, owned by General Atomics, succeeded in imposing the Beverley uranium mine on the Adnyamathanha Traditional Owners in north-east South Australia in the late 1990s.

The company negotiated with a small number of Native Title claimants, but did not recognise the will of the community as a whole. This divide-and-rule strategy, coupled with the joint might of industry and government, resulted in inadequate and selective consultation with the Adnyamathanha people.

Adnyamathanha woman Jillian Marsh wrote in a submission to a 2002-03 Senate inquiry: "Initial negotiation was misrepresentative, ill-informed, and designed to divide and disempower the Adnyamathanha community. ... The resulting meeting was held under appalling conditions. The company (Heathgate Resources) censored the entire meeting with the assistance of [a Liberal member of the SA Parliament] and the State Police. One Adnyamathanha man that stood up and asked for an independent facilitator from the floor to be elected was immediately escorted by two armed Police holding him on either side (by his arms) to the outside of the building."

The late Mr Artie Wilton, the last living Wilyaru man (Adnyamathanha full initiate), said in June 2000 that he was never consulted about the Beverley uranium mine and never agreed to the Beverley or Honeymoon mining projects. "The Beverley Mine must be stopped, dead stopped," Mr Wilton said.

Kelvin Johnson, an Adnyamathanha man from Nepabunna, said in a June 2000 statement: "We protest at the treatment of our people being forced into an unfair process of negotiation. We protest because our land is being damaged against our wishes. We protest because Native Title legislation is not helping our country. We protest because the State Government and the Mining Industry refuse to listen to our concerns. We protest because it is our right and our responsibility to look after this country."

In May 2000, SA's STAR Force police responded brutally to a peaceful protest at the Beverley mine site, and used pepper spray on an 11 year old Adnyamathanha girl.

Beverley is an acid in-situ leach mine. ISL involves pumping acid into an aquifer. This dissolves the uranium ore and other heavy metals and the solution is then pumped back to the surface. The small amount of uranium is separated at the surface. The liquid radioactive waste — containing radioactive particles, heavy metals and acid — is simply dumped in groundwater. From being inert and immobile in the ore body, the radionuclides and heavy metals are now bioavailable and mobile in the aquifer.

Heathgate has no plans to clean up the aquifer as it says the pollution will 'attenuate' — that the aquifer will return to its pre-mining state over

time. This claim has been recently queried by the scientific community as being highly speculative with no firm science behind it.

Jillian Marsh states in her submission to the 2002-03 Senate inquiry: "The government chose not to demand that the groundwater be rehabilitated, an unacceptable situation for the Australian public at large given our increasing reliance on groundwater and the increasing salinity of land surfaces and water systems."

The 2002-03 Senate inquiry stated that: "The Committee is concerned that the ISL process, which is still in its experimental state and introduced in the face of considerable public opposition, was permitted prior to conclusive evidence being available on its safety and environmental impacts. The Committee recommends that, owing to the experimental nature and the level of public opposition, the ISL mining technique should not be permitted until more conclusive evidence can be presented on its safety and environmental impacts. Failing that, the Committee recommends that at the very least, mines utilising the ISL technique should be subject to strict regulation, including prohibition of discharge of radioactive liquid mine waste to groundwater, and ongoing, regular independent monitoring to ensure environmental impacts are minimised."

Yet ISL mining continues, as does the discharge of toxic liquid waste into groundwater.

Another feature of ISL mining is surface contamination from spills and leaks of radioactive solutions. There have been over 20 spills at Beverley, such as the spill of 62,000 litres of contaminated water in January 2002 after a pipe burst, and the spill of 15,000 litres of contaminated water in May 2002.

More information

- Friends of the Earth webpages and links: www.foe.org.au/anti-nuclear/links#2