SHOULD AUSTRALIA ACCEPT HIGH LEVEL WASTE FROM OVERSEAS?

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Friends of the Earth

There is a precedent to current discussions about establishing an international high-level nuclear waste repository in Australia. Pangea Resources was an international consortium that was planning such a repository in Australia. Pangea set up an office in Australia in the late 1990s but gave up in 2002 in the face of overwhelming public opposition. The existence of Pangea Resources was a closely-guarded secret until a corporate video was leaked to the media. Pangea chief Jim Voss denied meeting with federal government ministers when he had in fact met at least one minister. A Pangea spokesperson said: "We would not like to be lying ... we very much regret getting off on the wrong foot."

How much money might be made by taking nuclear waste from other countries? There is no precedent to base an estimate on. There are many constraints, such as the fact that some of the major nuclear countries − such as Russia, France, and India − reprocess their spent nuclear fuel so would be unlikely to want to send it to Australia. BHP Billiton's submission to the Switkowski Review states that the utilities to which it sells uranium "generally regard their spent fuel as an asset".

Some nuclear proponents believe that spent nuclear fuel is a "multi-trillion dollar asset" − because it can be processed for reuse as reactor fuel − and they also believe that countries will pay "tens of billions of dollars" to relieve themselves of this multi-trillion dollar asset. Go figure.

Former Prime Minister Bob Hawke said Australia could end the disadvantage endured by indigenous people by opening up traditional lands as dumping sites for nuclear waste from around the world. But there are simpler and safer methods to close the gap. For example, the federal government could reverse planned cuts of $500 million from indigenous spending over the next five years.

Professor John Veevers from Macquarie University wrote in *Australian Geologist* about the serious public health and environmental risks associated with a high-level nuclear waste repository:
"Tonnes of enormously dangerous radioactive waste in the northern hemisphere, 20,000 kms from its destined dump in Australia where it must remain intact for at least 10,000 years. These magnitudes − of tonnage, lethality, distance of transport, and time − entail great inherent risk."

Dr Mike Sandiford from the School of Earth Sciences at University of Melbourne writes:
"Australia is relatively stable but not tectonically inert, and appears to be less stable than a number of other continental regions. Some places in Australia are surprisingly geologically active. We occasionally get big earthquakes in Australia (up to about magnitude 7) and the big ones have tended to occur in somewhat unexpected places like Tennant Creek. The occurrences of such earthquakes imply that we still have much to learn about our earthquake activity. From the point of view of long-term waste disposal this is very important, since prior to the 1988 (M 6.8) quake, Tennant Creek might have been viewed as one of the most appropriate parts of the continent for a storage facility. Australia is not the most stable of continental regions, although the levels of earthquake risk are low by global standards. To the extent that past earthquake activity provides a guide to future tectonic activity, Australia would not appear to provide the most tectonically stable environments for long-term waste facilities."

There are social as well as technical dimensions to risk assessments. For example, the 'clean-up' of Maralinga was badly mishandled because the government officials had little or no project management experience and little or no understanding of the technical risks, and because the federal government wasn't prepared to spend the money to carry out the clean-up properly.

Nuclear engineer Alan Parkinson wrote:
"The disposal of radioactive waste in Australia is ill-considered and irresponsible. Whether it is short-lived waste from Commonwealth facilities, long-lived

plutonium waste from an atomic bomb test site on Aboriginal land, or reactor waste from Lucas Heights. The government applies double standards to suit its own agenda; there is no consistency, and little evidence of logic."

Some argue that Australia has a moral responsibility to accept the high-level nuclear waste arising from the use of Australian uranium in power reactors overseas. In fact and in practice, the responsibility for managing nuclear waste lies with the countries that make use of Australian uranium. There are no precedents for Australia or any other country being morally or legally responsible for managing wastes arising from the use of exported fuels, or from the export of any other products.

If any moral responsibility lies with Australia, that responsibility arguably rests with the uranium mining companies (which are foreign-owned or majority foreign-owned) rather than with Australian citizens or federal or state governments.

One plausible scenario is uranium being mined on Aboriginal land regardless of Aboriginal opposition, and high level nuclear waste being dumped on Aboriginal land, again without consent. That scenario is immoral twice over.

It is also argued that Australia has a moral responsibility to accept high-level nuclear waste because Australia has more suitable geology than other countries, and/or or a more stable political system. Those arguments rest on questionable assumptions. Australia is less tectonically stable than a number of other continental regions according to Dr Mike Sandiford. On the basis of the flawed Maralinga clean-up, there is no reason to believe that a high-level nuclear repository (or a waste-to-fuel recycling project) would be carefully and responsibly managed in Australia, or that regulation would be rigorous and independent.

The Northern Territory Minerals Council has questioned whether Australia has an obligation to accept nuclear waste:
"In terms of the proposition of taking back nuclear waste, that should be viewed as an economic rather than a moral decision. I do not think that it follows, as some have said, that because we produce uranium we have a moral obligation to take back spent fuel rods and the like. The vast quantity of economic benefit is derived by those producing power and selling it down the track. The percentage we derive from selling the product is minuscule. If it makes economic sense, by all means look at it on that economic and scientific basis, but I do not think there is a moral obligation to do it."

Likewise, Alan Layton from the Association of Mining and Exploration Companies said:
"The only observation I would make is that there is probably an argument that there is some safety in burying the wastes close to where the product is used, rather than transporting them. I am not certain about this notion that when we sell uranium we necessarily have to take back its wastes."

It is argued that Australia would be making a contribution to global non-proliferation efforts by accepting nuclear waste from overseas. However it is not clear that non-proliferation efforts would be advanced − it would depend on many factors. Australia's acceptance of high-level nuclear waste would add to the number of countries with significant stockpiles of fissile material (because it contains plutonium) − in that sense it would contribute to proliferation risks, not to the resolution of those risks.

BHP Billiton's submission to the Switkowski Review stated:
"BHP Billiton believes that there is neither a commercial nor a non-proliferation case for it to become involved in front-end processing or for mandating the development of fuel leasing services in Australia. ... There is no evidence that a change to current Australian Government policies to facilitate domestic enrichment, fuel leasing and high level waste disposal would lead to significant economic opportunities or reduce proliferation risks in the foreseeable future."

More information:

FoE/CCSA briefing paper on SA Nuclear Fuel Cycle Royal Commission, April 2015, section 7:
www.conservationsa.org.au/component/content/article/1679-nuclear

www.foe.org.au/anti-nuclear/issues/oz/nontdump

www.foe.org.au/anti-nuclear/issues/nfc/waste