

Ngoppon Together Inc.

(Walking Together Reconciliation Group Murray Bridge SA)

We acknowledge the Land, Waters and Environment of the Ngarrindjeri People, the traditional custodians of this area

RESPONSE to the NUCLEAR FUEL CYCLE ROYAL COMMISSION TENTATIVE FINDINGS

- due March 18th, 2016

INTRODUCTION: Ngoppon Together Inc.'s Aboriginal and non-Aboriginal members continue to be vitally concerned in regard to the well-being of lands and waters as well as in the health of the present generations of the people of our state and our nation. We recognise our grave responsibility to our future descendants. Based in South Australia's Murraylands, we hear the contemporary cry of the Ngarrindjeri Elder of our region. Shocked to hear of this scheme to willingly import high level radioactive waste to the country posed as a serious recommendation from the Royal Commission: ***'They're determined to destroy the country!'***

We believe that the Royal Commission has got this wrong and that South Australia should not use part of its land mass as a dump for highly radioactive 'used fuel' from overseas nuclear reactors (called "high level waste") which, in the Royal Commission's own words, "requires isolation from the environment for many hundreds of thousands of years". (#73)

We ask the South Australian government if they intend to act on this recommendation of the Royal Commission's Tentative Findings- ***What Duty of Care to its citizens is being exercised?***

Our members view with deep apprehension the sections **Social and Community Consent** and **Law, Heritage and Respecting Rights** particularly #110, #111 and #115 with their many subclauses.

We put the following warning to the Commission and consequently to the State Government. **No matter how culturally correct are its procedures** in dealing with an Aboriginal Community in our state - to succeed in the Commission's recommendation to establish there, a site for international high-level radioactive waste will be an ultimate betrayal of a Government's responsibility to their citizens and their future generations. The means fail to justify the end.

'We don't want the nuclear waste to be on our lands. Long ago our people didn't have any rights and went through the bomb. That's why we haven't got any Old People today. But these days we have our legal rights. How many people do they want to die like what we seen?'

Mima Smart OAM immediate past Chairperson. Yalata Community Inc. October 2015

According to the wishes of the Commission, Ngoppon Together responds to a number of its TENTATIVE FINDINGS directly and in order. We will deal with the issue that the Royal Commission is recommending to the South Australian Government:

INTERNATIONAL USED FUEL (HIGH LEVEL WASTE) AND INTERMEDIATE LEVEL WASTE

NB Ngoppon Together calls upon the Commission in its final Report due to be released on May 6 to abandon the 'framing' of essential concepts into words which downgrade risks and are therefore likely to be more acceptable to the general public.

We cite the words ‘used fuel’ as a primary example of this practice which we warn needs to be named continually and clearly for what it actually is – ‘high level radioactive waste.’

WHAT ARE THE RISKS?

73. Following its discharge from a reactor, used fuel comprises ceramic uranium material which remains sealed in its metal cladding. It generates heat and is highly radioactive and hazardous. The principal concern is the potential for radionuclides to migrate from the used fuel into the natural environment, where they could be inhaled or ingested by humans and other organisms. That hazard diminishes over time. Within 500 years, the most radioactive elements have decayed. However, because of its radioactivity, used fuel requires isolation from the environment for many hundreds of thousands of years.⁶⁸

1. Our members welcome other sentences of the first part of Para 73 wherein the risks of this extraordinary proposal are named: that is high level radioactive waste is named as *‘highly radioactive and hazardous.’ ... ‘for hundreds and thousands of years.’*

Also named is the *potential for radionuclides to migrate*. Over this extraordinary time frame we suggest the omission of the word ‘potential’. It is certain.

2. ‘That hazard diminishes over time. Within 500 years...’ We question the almost facile dismissal of enormous time frames. 500 years is more than twice as long as white occupation in Australia and yet it is seemingly dismissed here as a short time. **We don’t know what Australia’s political, or environmental situation will be over that period of time.**

74. There is international consensus that geological disposal is the best technical solution for the disposal of used fuel. Two countries, Finland and Sweden, have successfully developed long-term domestic solutions. That success has been both in gaining social consent for a facility and in developing an engineering and technical solution that has been licensed to safely provide for disposal over a long period. The more advanced of the two projects will start receiving used fuel early in the next decade. We remind the Commission of its serious obligation when presenting this information in its final Report to Government and to the public to admit that NO geological disposal facility yet exists successfully in practice. On the Commission’s own admission but not yet clearly stated orally (at the Launch of the Tentative Findings) the Finland facility which was mentioned frequently by the Commissioner is not yet ready to receive ‘spent fuel’ until ‘early in the next decade.’

Ngoppon Together adds the following relevant information

‘... it should be noted that there is only one deep underground repository for nuclear waste anywhere in the world – the Waste Isolation Pilot Plant (WIPP) in the U.S. state of New Mexico. WIPP was closed in 2014 because of a chemical explosion which ruptured a nuclear waste barrel and resulted in 23 workers being exposed to radiation. Before WIPP opened, the government estimated one radiation release accident every 200,000 years. But there has been one radiation release accident in the first 15 years of operation of WIPP.’

‘The Royal Commission’s report is silent about WIPP. It is silent about the Asse repository in Germany, where massive water infiltration has led to the decision to exhume 126,000 barrels of radioactive waste. The report is silent about the fire at a radioactive waste repository in the U.S. state of Nevada last year. And the report is silent about many other problems with the nuclear industry that it should have squarely addressed.’ Dr Jim Green. Friends of the Earth Australia. *Summary from the ‘Tentative Findings’ of SA Nuclear Fuel Cycle Royal Commission*. February 2016

75. In these facilities, the risk of the radionuclides migrating into the environment is managed by the geology in which the facility is situated as well as its engineered barriers (see Figure 5).

We note that in this finding the Commission actually admits that the engineering barriers will break down.

76. Each facility is sited in geological conditions that naturally limit the potential pathways for migration. While it is not possible to know the geological and climatic conditions in the distant future, reasonable predictions of such future

behaviour have been made from careful study of the particular geological formations over much longer periods in the past. Safety analysis has included an assessment of the barrier performance in a range of scenarios of possible future events over one million years. Geological analogues or observed natural conditions in similar ore bodies or materials provide additional confidence.⁷⁰

Our members again question the 'confidence' with which SA's nuclear Royal Commission seems to approach this whole extraordinary scheme. High-level radioactive waste which the Commission is recommending to actually import into our state and country keeps toxicity for an incredible 300,000 years. We put it to the Commission and to the SA Government who seem to be disposed and content to accept the findings as a last word on this frightening proposal that reasonable predictions of such future behaviour have been made from careful study of the particular geological formations over much longer periods in the past. Each of the underlined words (our emphases) represents easy assumptions which are ingenuous at best and deceptive at worst.

⁷⁷. Engineered barriers are designed to work in combination to greatly delay the exposure of the fuel to groundwater and ensure that if the radionuclides migrate into the natural environment... Here is an admission by the Commission that the radionuclides will eventually reach groundwaters.

For we South Australians there is overwhelming, sadly, local evidence of the complete inability of technology to contain risks and even in contemporary times to decontaminate. Our members draw attention to a completely relevant example of such failure to dispose of high-level waste in our own country; in fact in our own state.

There have been a total of four 'cleanups' of the Maralinga British nuclear bomb sites. The last in the mid 1990s is well remembered by our members - presented by authorities as the 'final solution' to the vexing question of the on going serious contamination of the Maralinga Lands post British nuclear tests. *The plan was to vitrify contaminated material, turning it into a solid glass-like monolith. But the government later realised that there was far more contaminated material than they had originally estimated and budgeted for. So, to cut costs, they curtailed and then abandoned vitrification and simply dumped the plutonium-contaminated material in shallow pit.* Friends of the Earth paper 2013

That is, the dangerous material was placed exactly as it had been before this extremely expensive and much vaunted exercise! And then- the operators were actually lauded as proponents of 'world's best practice'!

There is no container whether it is steel, concrete, titanium etc that will last for over one hundred years, so the notion of storing radioactive waste isolated from the ecosphere for one million years is pure fantasy. Doctor Helen Caldicott July 2015

⁸⁵. There is no existing market to ascertain the price a customer may be willing to pay for the permanent disposal of used fuel

. ^b. a separately located, secure, underground repository facility comprising a series of tunnels into which specially designed canisters containing used fuel and intermediate level waste are deposited for permanent disposal.

We note that the Japanese estimate for such a facility just for their own national waste is \$43 billion.

ECONOMIC IMPACTS

⁹¹. Financial assessments suggest that the integrated facilities could generate: ^a. total revenue (in undiscounted terms) of more than \$257 billion, with total costs of \$145 billion⁸⁵

The Commission states that there 'is no existing market to ascertain the price a customer may be willing to pay for the permanent disposal of used fuel' **so such estimates are simply conjectures with no genuine basis in reality**

We add the relevant comment from the *Conservation Council SA. February 2016*

'The Royal Commission report notes that spent nuclear fuel (high level nuclear waste) "requires

isolation from the environment for many hundreds of thousands of years."

In the US, the Energy Department's plan aims to safeguard nuclear material for the next 10,000 years. Presumably the argument is that residual radioactivity after 10,000 years is so low that active monitoring beyond that timeframe is not required.

*So what might the costs of monitoring waste for a period of 10,000 years be? The Royal Commission is silent on that important question. **Thus the Royal Commission's conclusion that importing waste could be profitable has no rational basis given that the cost of managing waste for millennia is not considered.**' (our emphasis).*

d. approximately 1500 full-time jobs during a construction period of about 25 years, peaking to about 4500, and more than 600 jobs once operations begin.⁸⁸

What an enormous price to pay! – saddling ourselves and our descendants, our lands and groundwaters for countless generations with high-level radioactive waste for such comparatively few jobs.

As Economics are constantly quoted by the Royal Commission and other proponents of this scheme of importing high-level radioactive waste, Ngoppon Together responds with an extended refutation by the South Australian economist Richard Blandy: *"The reason why South Australia should not allow a nuclear dump within its borders goes to the heart of cost-benefit analysis involving many generations of people, literally tens of thousands of generations, in this case. Cost-benefit analysis works well when the costs are up front and the benefits accrue into the future.*

But it falls apart when the benefits are up front and the costs accrue into the future. This is the case with the proposed high-level nuclear waste dump. We are promised an up-front bonanza, after 30 years of construction of the facility, with a net present value of "more than \$51 billion (at the intergenerational discount rate of 4 per cent)". In other words, we are bequeathing a stream of costs to our successor generations. They will be poorer as a result, and will have reason to curse their forebears for selfishly making themselves better off at their expense.'

Together with these economic risks come the inescapable physical risk: *"The problem with the high level nuclear waste dump is the inescapable risk (the Royal Commission says that "it is not possible to know the geological and climatic conditions in the distant future") of severely adverse outcomes that we might be passing on to tens of thousands of future generations of South Australians.'* Richard Blandy (Adjunct Professor of Economics in the Business School at the University of South Australia.) 23/3/16

SOCIAL AND COMMUNITY CONSENT

¹⁰³. Both social consent and community consent must be obtained for any new nuclear activity to commence in South Australia. ¹⁰⁵. In relation to a specific proposal, obtaining community consent, that is, informed agreement from an affected community, extends beyond meeting obligations to specific rights holders (such as landowners or native title holders or claimants). However, the scope of the relevant 'community', and what ought to constitute 'consent' from that community, will vary depending on what is proposed, who is affected, how they are affected and for how long. Community consent does not require unanimity.

¹⁰⁹.

¹¹⁰. Applied to the South Australian context, the impact of atomic weapons testing at Maralinga in the 1950s and 1960s remains very significant to many people. Those tests, and the subsequent actions of successive governments, have left many Aboriginal people in particular with a deep skepticism about the ability of government to ensure that any new nuclear activities would be undertaken safely. Many Aboriginal South Australians are generally cynical about the motivations of government, and its capability to deliver on commitments. As a result, many groups have communicated to the Commission their unwillingness to contemplate any further nuclear activities. Recognition of these views would be important in planning for, and community engagement on, any proposal.¹⁰⁴

¹¹¹. As part of a community engagement process...

In response we repeat the admonition of Dr David Suzuki in this regard:

'No government can ensure *that any (new) nuclear activities would be undertaken safely.* 'It is impossible.'

Ngoppon Together warns that to attempt to assure **any community Aboriginal or non- Aboriginal**, that the reverse is true is a deprivation of the human rights of such families and their future generations. It is a severe breaking of trust with our obligations to our own country and environment.

Our members consider that any attempt of a proposal to place this site on Aboriginal lands in SA will be a blatant disregard for the Custodians of their lands already so long disregarded. Yet since settlement, mainstream Australians have relied on their original care of the land - and continue to reap these benefits.

LAND, HERITAGE AND RESPECTING RIGHTS

112. The Commission has received many submissions that underscore the deep connection that Aboriginal people have with the land and their responsibility for its care. That strong relationship with land is central to the way that Aboriginal South Australians have considered projects, including proposed nuclear activities. It is critical that a proponent of any nuclear project understands and respects that connection.

115. From a practical standpoint, bearing in mind the concerns...

These particular Findings of the Royal Commission (including their many subclauses, not included), which note expressly Aboriginal Communities and specifically those communities deeply affected by the British nuclear tests at Maralinga, **ring immediate alarm bells for our members.**

We remind the Commission and consequently SA Government that to acknowledge the disastrous effects that the atomic weapons testing at Maralinga in SA in the 1950s and 1960s has had on Aboriginal Communities and non Aboriginal South Australians is one thing. Then to fail to learn from these experiences and to go ahead with this proposed project of importing high-level nuclear waste into our South Australia project is worse than foolish.

Not to learn from our history is indeed to risk repeating it.

We quote from Maralinga: The Anangu Story: 'The men were itchy from pulling buildings down, scratching all night. Later they came out with sores all over their chests. I seen men working tring to cover drums over, full of poison. Whitefellas had masks and protective clothing. Anangu men had nothing. My husband just had ordinary clothes and they made him drive the front end loader to bring drums of poison. He had to dig the holes to bury the drums, all the dust blowing up...My husband got sick later and died of lung cancer. Now everyone at Oak Valley has breathing problems...Yvonne Edwards. A pipe fell on his)my husband's) leg. A whitefella lifted him up and took him back to Yalata. Then he began coughing and we knew something ws wrong. Couldn't work anymore. Margaret May. (p 57. Allen&Unwin 2009)

Ngoppon Together reiterates from our introductory remarks our initial vital Response **'Our members view with deep apprehension the sections Social and Community Consent and Law, Heritage and Respecting Rights particularly #110, #111 and #115 with their many subclauses.**

*We put the following warning to the Commission and consequently to the State Government. **No matter how culturally correct are its procedures** in dealing with an Aboriginal Community in our state - to succeed in the Commission's recommendation to establish there, a site for international high-level radioactive **waste will be an ultimate betrayal of a***

Government's responsibility to their citizens and their future generations. The means fail to justify the end.'

Ngoppon Together members are distressed that an industry with so many negatives — economic, environmental, safety is even proposed within our state and nation. Our members submit that the Royal Commission must

- accept and
- make perfectly clear to the citizens of South Australia

that there are simply NO World's Best practice for the storage of nuclear high-level waste. The material is simply too dangerous, will live on dangerously for an outrageous 100,000 – to 300,000 years. Despite the fervent hopes of the nuclear industry/lobby– there are no technological solutions to its safe storage – now or likely to be in the foreseeable future and quite foreseeably, never.

Our members note that the November 2015 disaster in Brazil ,that the expertise of BHPBilliton did not prevent a dam collapsing with disastrous results. 'The Age November 2015. (Our comment: this was simply a dam collapse, which the environment minister, Izabella Teixeira, described as "the worst environmental disaster in Brazil's history". (Guardian Nov 2015).

How on earth does SA think they will have the expertise to control 13% the world's high-level nuclear waste – forever?

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RISKS AND CHALLENGES

RADIATION RISKS

#116-#124

Ngoppon Together gives warning of the following:

'The weight of scientific opinion holds that there is **no threshold below which ionising radiation poses no risk of inducing fatal cancers.**

Radiation protection agencies around the world including the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), all base regulations on the linear no-threshold model which assumes there is no threshold below which radiation exposure is safe. (our emphasis)

Friends of the Earth 'Ionising Radiation and Cancer.' Jan 2013

In 2012, cancer was estimated to be the leading cause of burden of disease in Australia, accounting for approximately 19 per cent of the total disease burden. In 2012, cancer was estimated to be the leading cause of burden of disease in Australia, accounting for approximately 19 per cent of the total disease burden.³

Australian Institute of Health and Welfare & Australasian Association of Cancer

Registries2012.Cancer in Australia: an overview, 2012.

Cancer series no. 74. Cat. no. CAN 70. AIHW.

Every Australian and every South Australian is surely wanting to create a world which is safe for their grandchildren's health. Eileen Wani Wingfield, *Kokatha* Elder spent most of her adult life opposing different forms of the nuclear cycle because of her early experiences with fallout; the Black Mist bomb from Emu in 1953. *'I've been fighting Roxby since the start. We don't want the dump because we've seen what happened to our children (from the bomb). Everyone was sick. I've got a grandchild, he's got a tumour in his head. Why do they do this to the innocent?'* EWW, Coober Pedy September 2003.

112. Ngoppon Together notes with alarm the quite dismissive manner in which the Fukushima disaster is noted by the Commission's Findings

TRANSPORT RISKS

133-138

Our members are concerned that in the Findings in this section the Royal Commission make no mention at all of transport accidents which occur world wide.

There have been a number of spills in Australia already in connection with the transport of radioactive waste. Advocates who claim there is no danger are simply flying in the face of the reality of the real world.

The NSW Parliamentary Inquiry into radioactive waste found there "is no doubt that the transportation of radioactive waste increases the risk of accident or incident – including some form of terrorist intervention".

ANSTO has acknowledged that there are 1-2 accidents or 'incidents' every year involving the transportation of radioactive materials to and from the Lucas Heights reactor plant.

Ngoppon Together asks: What kind of resources do individual Councils have throughout Australia to deal with the probability of a crash involving particularly intermediate or high level waste?

IMPACTS ON OTHER SECTORS¹¹⁸

155. There is no compelling evidence from any international experience that the development of nuclear facilities in South Australia would adversely affect other economic sectors, provided those facilities are operated safely and securely. There is a perception there would be an impact, which would need to be addressed in the process of obtaining community consent for any proposal. In the event of a major nuclear accident, adverse impacts on the tourism, agriculture and property sectors could potentially be profound.

No amount of rationalising and attempts to normalise this as a reasonable industry can eliminate the impact of demoralisation on the SA population as a whole when the inevitable happens and leaks, explosions or a terrorist attack occurs. Parents and care givers responsibility for the safety of their children/ grandchildren is completely undermined Governments have a responsibility to create as far as possible, a safe environment for its citizens.

If such a facility is established the State's largely clean, green image will be impossible to sustain. The argument that some European countries have many nuclear power facilities and suffer no loss of tourism does not add up to this plan of importing high-level radioactive waste – something with no precedence.

Tourist destinations obviously lose appeal when travel arrangements are considered – a

possibility of sharing the road or rail track with highly toxic radioactive waste, whether marked or not: not every SA tourist place is accessible by plane.

If South Australia has sometimes been in danger of being known as a 'Cinderella' state, any former such thought will be multiplied enormously. This could well result in withdrawal, loss of population, and loss of industries especially agricultural industries.

CONCLUSION: Ngoppon Together strongly refutes the quite fallacious so-called 'ethics' argument - *We export and so are morally bound to receive waste.* 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.' Conservation Council of SA May 2015 p 8

Aboriginal people oppose digging up uranium on their land in the first place and then to compound the burden, in the past at least are faced with the waste being imposed on them and their lands, *waste that is up to one million times more reactive after enrichment.*

Ngoppon Together warns that people are going to get sick. And that it's not as if we haven't got alternatives: the positive alternative is still possible. South Australia presently is the leading state in renewable energy (40%) and has the opportunity, if taken by government, to go down this positive healthy path to maintain a clean, safe country and waters, safe and healthy employment opportunities and ensure the safety, health and well being of all of its citizens.

Our members plead with Commissioner Scarce and the members of the Royal Commission, with Premier Weatherill and all Members of Parliament and Members of the Legislative Assembly: for the sake of our common humanity abandon all thoughts of this scheme. As fellow South Australians, Australians and as fellow human beings together, the implications and consequences of importing the world's radioactive waste in its highly toxic form is indeed terrifying; and, it must be said, a totally irresponsible legacy, for our generation to leave to the grandchildren, great grand children and every generation to come in our state of South Australia.

Thank you for receiving our Responses to the Tentative Findings of the Royal Commission into the nuclear fuel cycle.

Michele Madigan *for Ngoppon Together Inc.*

18th February 2016