AUSTRALIAN CONSERVATION FOUNDATION

mpi mineral policy institute

Ursula von der Leyen
President
European Comission

6th July 2021

To Ursula von der Leyen,

Re: Uranium mining in Australia

Australia is host to the world's largest uranium reserve and has a long history of mining and exporting uranium, including to EU member states. We provide this commentary to help inform your consideration of future energy options in Europe. Our experience with uranium mining has been characterised by spills, leaks, pollution, socialised costs, social division, adverse environmental and cultural impacts and dislocation from country. Uranium mining in Australia has always been, and remains, actively contested. This is due to the high risk to workers, communities and the environment and in response to the ongoing failure of the uranium sector to either comply with the regulatory framework or to meet commitments to host communities.

We are deeply concerned about global efforts by the nuclear industry to rebrand and position nuclear power as sustainable and 'clean'. From the very beginning of the nuclear cycle there are issues with pollution, compliance, community displacement, worker health and safety and the remediation of impacted sites. There is a continuing, costly and toxic legacy that is directly linked to uranium mining in Australia. Any expansion of nuclear power in Europe would increase pressure in Australia to mine our uranium reserves and potentially put more communities and ecosystems under threat. We strongly urge you to consider these impacts and lived experience in relation to the latest proposals by nuclear industry advocates to promote the nuclear option as a credible climate response.

The below summary details some of the problems with uranium mining in Australia, the issues and costs with mine rehabilitation and a glimpse of the impacts on host communities. It also provides the outcomes of the most recent inquiries into uranium mining and a summary of the state and federal prohibitions on uranium mining and nuclear power in Australia. The authors welcome the opportunity to provide any further detail that might assist with your consideration of this issue.

Uranium mines in Australia:

The attached table documents the status of Australia's uranium mines. This addresses projects that are operating, in care and maintenance, closed or currently non-commercial proposals. The table records incidents and risks at each of these sites. The experience of uranium mining in Australia has been dominated by under-performance, non-transparency, broken promises, and ongoing pollution and environmental impacts. Despite being home to the world's largest uranium reserves a combination of a lack of Indigenous and wider

community social license and a depressed commodity price means that there are now just two operating mines in Australia. These are confined to one state jurisdiction – South Australia. The legacy of earlier mining in the Northern Territory and Queensland and uranium exploration in Western Australia are enduring and bring significant costs and impacts. There are ongoing calls to close the two remaining uranium mines in South Australia and an active national campaign to restrict mining and cement existing policy bans into legislative prohibitions.

Uranium mine rehabilitation:

There are no active uranium mines in the Northern Territory and the focus is now on ensuring credible and comprehensive rehabilitation – a complex and costly task with no certainty of success. The Rum Jungle uranium mine, which closed in 1971, is about to undergo a renewed rehabilitation attempt at a cost more than $A300 million in public funds, to be funded by the federal government. The former Rio Tinto group mine, which supplied uranium for the British atomic weapons program, caused the destruction of Aboriginal heritage sites and continues to cause extensive environmental pollution of the Finniss River and surrounds. The Environmental Impact Statement for the rehabilitation project makes it clear that the project will not be able to completely restore the site but aims to limit the acid metalliferous drainage (AMD) and radiation pollution coming from the site since closure. The project is framed as maintaining and improving[1] the site conditions in response to the seriousness of the ongoing pollution and risks to the environment and community, however it is widely recognised that completely securing and rehabilitating the site is not feasible.

Australia's longest running uranium mine, the Rio Tinto/ ERA Ranger uranium mine in Kakadu, also in the Northern Territory, formally stopped all mining and processing in January 2021. The mine is now solely focused on rehabilitation. The rehabilitation of this site is expected to cost more than $A1 billion. In 2009 it was revealed that there had been over 150 leaks, spills and license breaches at Ranger and that at least 100,000 litres of contaminated water was leaking from the tailings storage facility each day.[2] A 2005 incident led to 150 people being exposed to drinking water containing uranium levels 400 times greater than the level permitted by national safety standards.[3] In 2013 a leach tank collapsed spilling over one million litres of radioactive and acidic slurry.[4] There are ongoing concerns that the rehabilitation plan is dangerously deficient[5] and does not include the remediation of the extensive tailings plume underneath the mine site. This is particularly concerning as the site is surrounded by the dual World Heritage listed Kakadu National Park.

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1 https://ntepa.nt.gov.au/__data/assets/pdf_file/0006/727062/statement_reasons_altered_proposal_rum_jungle_rehabilitation.pdf

2 Sydney Morning Herald 2009. Polluted water leaking into Kakadu from uranium mine https://www.smh.com.au/national/polluted-water-leaking-into-kakadu-from-uranium-mine-20090312-8whw.html

3 Supervising Scientist 2018 – _Uranium Mining in the Alligator Rivers Region Fact Sheet https://www.environment.gov.au/science/supervising-scientist/publications/uranium-mining-in-alligator-rivers-region

4 Australian Broadcasting Corporation 2013. Spill of contaminated material at Ranger uranium mine; locals fear for Kakadu National Park https://www.abc.net.au/news/2013-12-07/spill-at-nt-uranium-mine-near-kakadu/5142148

5 https://www.acf.org.au/closing_ranger_protecting_kakadu_new_report_raises_issues_about_rehabilitation_plan

Attempts to rehabilitate former mines including Mary Kathleen (Queensland), Alligator River mines and Nabarlek (NT), along with Radium Hill, Mt Painter and Wild Dog (SA) have all seen ongoing pollution issues and require ongoing government funding and management. More details on these sites are included in the attached table. There has been a systemic failure to rehabilitate uranium mines across Australia. Rehabilitation efforts at Rum Jungle are aimed at improving conditions, not completely restoring the site.[6] Efforts at Ranger are expensive and ambitious and have some significant gaps that are likely to constrain successful remediation.[7]

Uranium Inquiries:

The most recent inquiry into uranium mining in Australia was the 2003 Senate Inquiry into the adequacy of federal regulation of Jabiluka, Ranger, Beverley and Honeymoon uranium mines. The inquiry found ***"a pattern of underperformance and non-compliance, an absence of reliable data to measure the extent of contamination or its impact on the environment, an operational culture that gives greater weight to short term considerations than long term environmental protection and which concluded that changes were necessary in order to protect the environment and its inhabitants from 'serious or irreversible damage."***[8]

The Committee acknowledged that *"uranium mining presents unique hazards and risks to both human health and the environment"* (para 3.94) and recommended that *"all serious leaks and spills be investigated by Environment Australia and that minor leaks and spills be scrutinised by South Australia's Chief Inspector of Mines in collaboration with EA… and that the definitions as to categories of incidents be the subject of public consultation and be publicly available. A regulatory response, publicly available, should be provided following the investigation of an incident (para 3.109)."* There is public reporting of events in South Australia, however there is no public reporting on the investigations or on the outcomes. There are no such requirements in the Northern Territory and other jurisdictions.

The Committee also recommended that due to the experimental nature of In Situ Leach (ISL) mining, that ISL mining "*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."* Australia's three approved ISL mines are all in South Australia, one is currently operating and two remain in care and maintenance, and all are permitted to discharge radioactive liquid mine waste into groundwater despite this recommendation. The Committee also recommend that government *"Fund and establish a culturally appropriate forum for Traditional Aboriginal Owners and other local Aboriginal people to monitor and commission independent research in relation to social and environmental impacts of mining operations*

[6] http://www.mpi.org.au/wp-content/uploads/2021/05/Rum-Jungle-Joint-Submission-Final.pdf
[7] https://www.acf.org.au/closing_ranger_protecting_kakadu_new_report_raises_issues_about_rehabilitation_plan

[8] Regulating the Ranger, Jabiluka, Beverley and Honeymoon uranium mines: Environment, Communications, Information Technology and the Arts References Committee, 2003

and to develop policy recommendations in response to the findings" – no such funding or forum exists.

Other policy reviews in Queensland[9] and Western Australia[10] during the years where uranium mine bans were temporarily lifted, found that regulatory systems would require significant reform to address the unique risks of uranium mining. Regulatory issues and deficiencies that were identified included transparency, public consultation, health and safety legislation, structures to consider cumulative impacts, and integrated guidelines to consider all aspects of managing uranium mine wastes, the need for collaboration between government agencies, specific environmental guidance for uranium and the need for specific mine closure criteria for uranium. These various inquiries highlighted that uranium is different to other minerals and requires specific and strict regulation, greater transparency, and public consultation. Sadly, these prudent reforms were not adopted, however they are no longer required because both jurisdictions have since implemented policy bans on uranium mining and have no operating uranium mines.

Uranium prohibitions – a rejection of the nuclear sector:

Uranium mining in Australia is only allowed in South Australia and the Northern Territory. In Western Australia a policy ban on uranium mining was introduced in 2002 and re-introduced in 2017. The ban was lifted between 2009 – 2017 and during this period there was intensive uranium exploration and four project received approval. There are no operating mines in WA and existing approvals for the four proposed sites will all expire by January 2022.

In Queensland there is also a policy ban on uranium. This was first adopted in 1989 and then re-introduced in 2015 following a three-year period when the ban was lifted, in which there was significant uranium exploration, but no approvals. There are no operating uranium mines in Queensland. The states one former mine – a Rio Tinto group operation at Mary Kathleen was rehabilitated between 1981 & 1985 at a cost of around $A20 million. Independent research and site visits have shown long term environmental legacies from the site despite this rehabilitation. There is ongoing seepage of radioactive radium and thorium from the tailings, acid mine drainage and ongoing low-level uptake of heavy metals and radionuclides into vegetation.[11,12]

In New South Wales and Victoria there are legislative prohibitions on uranium mining - the *Uranium Mining and Nuclear Facilities (Prohibitions) Act 1986 (NSW)* and the *Nuclear*

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[9] Queensland Implementation Committee 2013

[10] Australian Centre of Geomechanics – Uranium Advisory Group 2010

[11] Lottermoser, B.G. 2011, Colonisation of the rehabilitated Mary Kathleen uranium mine site (Australia) by Calotropis procera: Toxicity risk to grazing animals. Journal of Geochemical Exploration, 111 (1-2), pp 39-46.
Lottermoser, B.G; Costelloe, M.T; Ashley, P.M. 2005, Contaminant dispersion at the rehabilitated Mary Kathleen uranium mine, Australia. Environmental Geology, 48 (6), pp 748-761.

[12] Mudd, G M & Diesendorf, M, 2010, Uranium Mining, Nuclear Power and Sustainability - Rhetoric versus Reality. In "Sustainable Mining 2010 Conference", Australasian Institute of Mining and Metallurgy (AusIMM), Kalgoorlie, Western Australia, Australia, August 2010, pp 315-340.

Activities (Prohibitions) Act 1983 (Vic). Tasmania and the Australian Capital Territory have neither formal bans nor commercial uranium ore bodies.

It is important to recognise that these prohibitions and bans are the result of a community rejection of an industry that has greater risks and costs than benefits. There is deep community and civil society sentiment opposed to uranium mining and the nuclear industry. The national prohibition on domestic nuclear power is further evidence of both the unacceptable risk of the industry and the widespread opposition to the sector. While there are some people who support nuclear power and uranium mining the existing prohibitions reflect a deeper rejection of the nuclear industry which is supported across a broad demographic of Australian society.

In response to the most recent efforts of the nuclear industry to overturn long held and popular prohibitions in Australia a joint statement was signed by over 60 organisations representing millions of Australians, including our peak national and state/ territory trade unions and leading environment and medical organisations.[13] The Electrical Trades Unions, one of Australia's largest unions representing 70,000 workers in the power industry has launched a campaign against nuclear power in Australia which can be seen here. There have been many reviews of nuclear power in Australia in recent years and the main findings have been that pre-conditions for advancing domestic nuclear power must include bipartisan support and a credible business case for nuclear power. There is no bipartisan support for nuclear power and the economics of the nuclear power remain prohibitive.

Uranium mine impacts of communities:

The impacts on host communities in Australia have been prolonged and painful. There have been impacts to natural systems and cultural heritage sites, particularly through water extraction and degradation and adverse social impacts caused through the loss of access to cultural heritage sites and hunting grounds. There have also been impacts caused by the influx of miners to remote areas and divisions created through engagement with mining companies. Communities have battled with disempowerment through a legal system which routinely preferences mining rights over Indigenous rights. Uranium mining in Australia has had deep and long-lasting social impacts and is often poorly understood and considered. Among many communities there is also a deep sense of responsibility about the life cycle of uranium and the downstream impacts of this material which can cause deep grief and sorrow.

Koara elder Richard Evans has said: "*I am happy that while that uranium is in the ground it is safe; I'm concerned what it's going to do when it comes out of the ground. Now if it's going to start affecting people in another country, destroying their lives like at Fukushima, Chernobyl and Maralinga, I'm concerned about that, because that's my country that could be doing that.*"

[13] Joint submission to the Standing Committee on Environment and Energy Inquiry into Nuclear Energy in Australia. https://dont-nuke-the-climate.org.au/joint-statement/

The Gundjeihmi Aboriginal Corporation represents the Mirarr Traditional Owners of the area of Kakadu impacted by the Ranger mine. They have released many statements and hosted Japanese visitors including former Prime Minister Naoto Kan offering their sympathies, solidarity and sadness about Australian uranium being directly and formally linked to the Fukushima nuclear disaster. In one statement they said *"Mirarr want the world to understand the responsibility we feel for the impacts of uranium from our country."*[14]

Mirarr elder Yvonne Margarula has been vocal in her solidarity with the affected Japanese community and has also been active in describing the impacts of mining. *"Mining and the millions of dollars in royalties have not improved our quality of life ... None of the promises last but the problems always do."*[15] In a letter to the UN Secretary General she wrote ***"In 2009 the European Commission found that approximately 70% of uranium used in nuclear reactors is sourced from the homelands of Indigenous minorities worldwide. We Mirarr believe that this constitutes an unfair impact on Indigenous people now and into the future. We suffer the dangers and long-term impacts of the front end of the nuclear fuel cycle so that others overseas may continue to enjoy lives without the awareness of the impacts this has on the lives of others."***[16]

Arabunna elder Kevin Buzzacott, the winner of the 2021 Conservation Council of SA lifetime achievement award and co-founder of the Australia Nuclear Free Alliance outlined in a statement to BHP shareholders that: *"We do not want any more water taken out of the Great Artesian Basin we want that to stop. To the shareholders of BHP - don't invest any more money into this development, you will have a lot on your conscience. Sooner or later you will have to pay for the rehabilitation of that land, and you should know by now that this land is sacred. We don't know if you shareholders understand the impacts of what you're doing to the Arabunna people, the Kokatha people and other tribes around that area. You don't understand what you're doing to the land and the culture."*[17]

The statements from Aboriginal communities in Australia convey a deep frustration with an industry that has failed them, a government that has not protected their rights and interests, the disempowerment that restricts their ability to fulfill custodial responsibilities to keep uranium safely in the ground and the burden of lasting environmental, social and cultural impacts from mining. From the first shovel and the very beginning of its life cycle Australia's uranium trade has deep and lasting impacts that should preclude any new mining operations.

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[14] https://www.sbs.com.au/language/english/australia-is-deeply-connected-to-the-fukushima-nuclear-accident

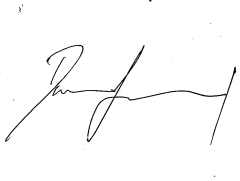
[15] May 2005 Gundjeihmi Aboriginal Corporation submission to House of Representatives Standing Committee on Industry and Resources Inquiry into Developing Australia's Non-Fossil Fuel Energy Industry

[16] http://static1.1.sqspcdn.com/static/f/356082/11963020/1303983838710/Yvonne+Margarula+Fukushima+Letter.pdf?token=mC4XiF0sOFXZN44Ud9S6GnCR5ec%3D

[17] https://www.foe.org.au/media-releases/2008-media-release/bhp-billiton-agm%3A-olympic-dam-legal-privileges-a-disgrace

We thank you for your consideration of this summary of our experience with uranium mining in Australia. We would be happy to provide any further comment or clarification around Australia's contested and contaminating uranium industry. We urge you to promote a shared energy future that it renewable, not radioactive and does not put workers, communities and the environment at risk.

Yours sincerely



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The Australian Conservation Foundation is committed to inspiring people to achieve a healthy environment for all. For over 50 years ACF has been a strong voice for the environment, promoting solutions through research, consultation, education and partnerships and by working with the community, business and government to protect, restore, celebrate and sustain our environment.

The Mineral Policy Institute assists communities affected by specific mining projects and works towards achieving industry reform through improvements to policy, law and practice. MPI's work in Australia has been focused on addressing mining legacies nationally through research and advocacy focused on social and environmental impacts from mining. Together we are pleased to make this submission.
