

To: Resources Sector Regulation study

Productivity Commission

Email: resources@pc.gov.au

28 August 2019

RE: Federal responsibilities to regulate to protect Matters of NES under the EPBC Act in resource project Environmental Management - including a key requirement for 100% Bonds.

Please consider this public submission on federal government responsibilities in regulation of the resources sector regarding the protection of Matters of National Environmental Significance (NES) in terms of Environmental Management & Rehabilitation, including a requirement for 100% Bonds.

The Terms of Reference of this Productivity Commission (PC) review study variously call for:

an assessment of best practice project approvals; to improve transparency on current and future resources projects; to identify leading environmental compliance arrangements and to ensure robust protections for the environment are maintained; and to so without compromising community and environmental standards.

Further, the Joint Ministerial media release states the study will complement the statutory review of national environmental protection law, with the aim to ensure that resource projects are transparently and efficiently assessed "*while upholding robust environmental standards.*"

This Productivity Commission study should satisfy these requirements as prerequisites to, and as public interest tests of, the cited focus on regulation with a material impact on business investment.

This submission provides a set of Recommendations on federal responsibilities to resource projects under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), as lead arrangements in Environmental Management and in protection of Matters of NES, including securing 100% Bond coverage for all project rehabilitation and waste management liabilities:

- Secure a Bond to cover 100% of project rehabilitation, waste management and closure liabilities at each resource project regulated in the federal jurisdiction;
- Require a review of resource project rehabilitation, waste management and closure plans to apply robust contemporary standards, for lead Environmental Protection including Matters of NES, and to inform required costings to ensure 100% Bond coverage of all liabilities;
- Transparency and regulatory accountability require public disclosure of resource project rehabilitation, waste management and closure plans and costings, including the value and type of Bonds held;

- As a priority, require a review of tailings waste storage facilities for “Extreme Risk” consequences status and make requisite contingency plans public in each case;

The PC should investigate wider application of this model to State and Territory jurisdictions.

Information on a relevant case study is presented as context for these Recommendations: the BHP Olympic Dam Mine (ODM), by far the largest and most influential mining operation in SA.

A four-page Briefing Paper “*BHP must lodge a bond to cover 100% of rehabilitation liabilities at Olympic Dam*” prepared by David Noonan (June 2019) for lead Joint Environment NGO’s, the Australian Conservation Foundation, Friends of the Earth and Conservation SA, is provided.

The PC should consider the Joint ENGO Recommendations on Olympic Dam in this Briefing Paper.

A set of seven Joint ENGO public interest Briefing Papers (David Noonan, June 2019) are available on Olympic Dam case study key issues at: <https://nuclear.foe.org.au/olympic-dam/>

Further, I formally submit a recent overview article on federal responsibilities to public interest regulation of Olympic Dam Mine for consideration by the PC in this review study and as in-context case study support for the set of broad Recommendations provided:

“BHP Olympic Dam Tailings: an “Extreme Risk” to Workers and to the Environment”

Article by David Noonan, Independent Environment Campaigner, 30 June 2019

Available at: <https://nuclear.foe.org.au/bhp-olympic-dam-tailings-an-extreme-risk-to-workers-and-to-the-environment/>

Please feel free to make contact on any aspect of this eight-page public submission, my Mobile number, e-mail and address are provided in the e-mail cover note to this submission.

My background includes 16 years as a campaigner for Australian Conservation Foundation (ACF).

Note: Following the Federal Minister’s decision on the BHP Olympic Dam EPBC Act Referral 2019/8465 for a major new Tailings Storage Facility Six (TSF 6), I propose to make a further submission to this PC Resource Sector Regulation review study.

Yours sincerely

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BHP Olympic Dam Mine: a case study in needed federal public interest regulation

BHP Olympic Dam Mine triggers a number of Matters of NES under the EPBC Act, including:

- uranium mining as a “*nuclear action*”, with “*the environment*” as the protected matter;
- the protection of Mound Springs as a listed “*Endangered Ecological Community*” impacted by BHP extraction of water from the Great Artesian Basin for ODM operations;
- Listed Bird Species & Migratory Bird Species subject to mortality at ODM Tailings Waste Storage Facilities and significant mortality due to BHP’s continued outdated operation of ODM Evaporation Ponds for acid mine waste waters.

Uranium mining is a controlled action under the EPBC Act controlling provisions “*Protection of the Environment from Nuclear Actions*” EPBC Section 21 & 22A. In assessing a “*nuclear action*” as defined in the EPBC Act the federal Department of Environment has stated:

“This means that it is necessary to consider impacts on the whole environment in addition to specific matters to be considered under other relevant controlling provisions”

In: “[Olympic Dam expansion assessment report EPBC 2005/2270](#)”, Sept 2011, 5. Assessment of Impacts on the Environment, p.4.

Section 134(1) of the EPBC Act allows the Minister to impose conditions on an approval:

“(1) The Minister may attach a condition to the approval of the action if he or she is satisfied that the condition is necessary or convenient for:

(a) Protecting a matter protected by a provision of Part 3 for which the approval has effect;”

With a uranium proposal triggering Section 21 “*Protection of the Environment from Nuclear Actions*”, the protected matter is “*the environment*”. The Minister can require assessment of risks and impacts to the environment and attach conditions as “*necessary or convenient*” to protect the environment.

However, BHP has avoided paying a mine rehabilitation bond at Olympic Dam since taking over the project in 2005 and now faces a significant long-term multi-hundred million dollar liability.

The recent BHP admission that three of the current Olympic Dam tailings waste storage facilities exhibit an “*extreme risk*” consequences status – the highest risk category, heightens the public interest obligation on regulators to require BHP to secure a 100% Bond on ODM liabilities.

The [BHP Tailings Facilities Disclosure](#) (07 June 2019, p.11-12) states three Olympic Dam tailings waste storage facilities are at the highest “*extreme risk*” hazard category based on the consequences of a potential catastrophic failure of the radioactive tailings waste facilities.

BHP’s “[ESG Briefing: Tailings Dams](#)” (June 2019, p.17) states the “*Principal Potential Impact*” in a ‘most significant failure’ of extreme risk Olympic Dam tailings waste facilities is that of “*Employee impacts*” – with the potential loss of life of BHP employees at Olympic Dam reported at 100.

The Canadian Dam Safety Guidelines “*extreme risk*” consequences category shows impacts: at a potential loss of life of more than 100; an extreme loss of infrastructure and economics; and a major

permanent loss of environmental and cultural values – with restoration stated to be impossible (In: BHP’s “ESG Briefing: Tailings Dams”, p.10).

The SA state government has failed in its responsibility to secure and impose a non-negotiable unconditional advance bond on BHP for 100% of the rehabilitation liabilities at Olympic Dam.

The federal government can require BHP to provide a bond to meet the full cost of rehabilitation liabilities at Olympic Dam, irrespective of whether or not SA acts on its responsibilities in this regard.

The federal government should act to require a statutory 100% unconditional bond on BHP to address a modern estimate of rehabilitation liabilities across the entire Olympic Dam operation.

This would require BHP to present a costed Mine Closure Plan including a Tailings Disposal Plan based on the pre-requisites required by a comprehensive Safety Risk Assessment of all Olympic Dam mine tailings. The effectiveness of “extreme risk” contingency plans must also be tested in public.

These studies and the proposed bond arrangement must be subject to public scrutiny prior to the approval or advance of any new Tailings Storage Facilities or expansion of radioactive tailings output.

This should be applied ASAP, including as a Condition on any Approval to the BHP Olympic Dam EPBC Act Referral 2019/8465 for a proposed major new Tailings Storage Facility Six (TSF 6).

The SA “Olympic Dam Major Projects Declaration” (SA Government Gazette, 14 Feb 2019, p.461-462) has already “excluded” the three “extreme risk” Olympic Dam tailings waste facilities, and the proposed major new TSF 6 and associated Evaporation Pond 6, from the scope of a required public environmental impact assessment process on BHP’s proposed next Olympic Dam Mine expansion.

To exclude, or to fail to apply, environmental assessment and public consultation on fundamental environmental impacts of uranium mining at Olympic Dam is contrary to the public interest, and works against transparency, scrutiny, public confidence and basic modern community expectations.

Olympic Dam Mine is an example of failure of a State jurisdiction to properly regulate a major resource operation and of the need for federal regulation to take a public interest lead role.

BHP ODM presents significant long term environmental and public health implications, multiple “extreme risk” tailings waste piles and unresolved radioactive risks and impacts.

BHP Olympic Dam radioactive tailings waste presents a significant, near intractable, long-term risk to the environment (see: Joint ENGOS Tailings Briefing Paper, June 2019).

The tailings at Olympic Dam contain approximately 80% of the radioactivity associated with the original ore and characteristically also retain around one third of the uranium from the original ore. Olympic Dam radioactive tailings wastes retain the radioactive decay chains of uranium, thorium and radium and should be isolated from the environment for over 10,000 years.

Since 1988 Olympic Dam has produced around 140 million m³ of radioactive tailings, intended to be left in extensive above ground piles on-site, imposing ongoing risks – effectively forever.

BHP MUST LODGE A BOND TO COVER 100% OF REHABILITATION LIABILITIES AT OLYMPIC DAM

Briefing written by David Noonan for the Australian Conservation Foundation, Friends of the Earth and Conservation SA

For more information on BHP's proposed expansion of the Olympic Dam mine visit nuclear.foe.org.au/olympic-dam

June 2019

BHP has avoided paying a mine rehabilitation bond at Olympic Dam, which is by far the largest and most influential mining operation in South Australia, and now faces a significant long-term liability.

BHP must ensure this long-term rehabilitation liability is not left as a legacy cost to the public.

“There are no bonds held by the Commonwealth or State level in relation to the Olympic Dam project.” (Answer by the Minister for the Environment to Senate Question No.94, 1 Sept 2016).

It is not acceptable that decades after the passage of the *Roxby Downs (Indenture Ratification) Act 1982* successive SA and federal governments have failed to realise a bond over Olympic Dam.

The Olympic Dam uranium mine presents one of world's largest ever radioactive tailings rehabilitation liabilities at around 180 million tonnes (Mt) tailings, with ongoing tailings output of around 10 Mt/year.

Uranium mining is a Matter of National Environmental Significance as a “*nuclear action*” under the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). BHP's current Olympic Dam underground mining expansion proposal is subject to the federal EPBC Act.

The federal government can require BHP to provide a bond to meet the full cost of rehabilitation liabilities, irrespective of whether or not the SA government acts on its responsibilities to do so. The federal government has stated its power to require a rehabilitation bond at Olympic Dam under the EPBC Act, in [Approval Conditions \(EPBC 2005/2270\)](#) set in Oct 2011 on an earlier proposed open pit expansion project.

“Rehabilitation bond Conditions 33-38” apply the Federal Minister's powers, including that:

- The Minister can require BHP as the Approval Holder to “*provide details of the financial arrangements that may be required by the SA Government in relation to ensuring adequate rehabilitation for the action.*”
- “*If at any time the Minister determines in writing that s/he is not satisfied that adequate financial arrangements, as may be required by the SA Government, are in place to ensure that the Mine Closure Plan (as required under Condition 32) will be implemented, the Minister may require the Approval holder to provide an arrangement (in the form of a bond,*

financial guarantee or similar arrangement, in these conditions ‘a bond’) as directed by the Minister.”

- *“The maximum value of a bond that may be required by the Minister is the difference between the value of the arrangement the Approval Holder has provided to meet South Australian requirements, and the amount determined by the Minister as the full cost of implementation of the Mine Closure Plan.”*
- *“The Minister may decrease the amount required where the Approval Holder has decreased the liability through undertaking rehabilitation.”*
- *“In providing for or varying a bond amount in accordance with these Conditions, the Minister may request the Approval Holder to obtain written quotes for the cost of the rehabilitation liability under the Mine Closure Plan from a third party approved by the Minister.”*
- *“The Approval Holder must meet all of the charges and costs in obtaining and maintaining the bond.”*

The federal Department of Environment “[Olympic Dam expansion assessment report EPBC 2005/2070](#)” (Sept 2011) states at 5.1.8 Rehabilitation and Closure, Recommendations, that:

“Best practice mining standards require a comprehensive closure plan to be in place before mining commences.

It is likely that the SA Government will require a rehabilitation bond or similar financial arrangement to ensure a rehabilitation liability is not left for the landholder (ultimately the SA Government).

However, as a precautionary measure, to ensure rehabilitation liabilities are fully addressed the Department recommends that the Minister retain the option of requiring a bond on BHP in favour of the Commonwealth for up to the full cost of the rehabilitation liability.”

The Department also states that *“post closure environmental outcomes must be achieved indefinitely”*.

In terms of policy direction, the SA Department of State Development conducted a *“Leading Practice Mining Acts Review”* that addressed mine rehabilitation issues.

A Review Discussion Paper, *“2.3 Enforcing leading practice mine closure planning, and progressive rehabilitation to achieve sustainable mine completion outcomes”* (DSD, Dec 2016, p.52-55), states:

“Appropriate rehabilitation of all mining operations should be non-negotiable. Planning for mine closure from the earliest stages of mine planning and progressive rehabilitation throughout the life of a mine is leading practice behaviour, and all regulators should be able to elicit this behaviour...”

The current process for mining operations in SA is that the Government seeks to impose unconditional bonds for 100% of the estimated rehabilitation liabilities.

The Department is proposing to introduce a leading practice financial assurance model into South Australia that will adequately meet three 'non-negotiable' criteria."

The State of SA has also endorsed Recommendation 5 of the Nuclear Fuel Cycle Royal Commission:

"Based on the findings set out in the report the Commission recommends that the South Australian Government:

5. Ensure the full costs of decommissioning and remediation with respect to radioactive ore mining projects are secured in advance from miners through associated guarantees."

However, the State of SA has failed in its responsibility to secure and impose a "non-negotiable" unconditional bond in advance on BHP for 100% of the rehabilitation liabilities at Olympic Dam.

The "[Olympic Dam Major Projects Declaration](#)" (SA Government Gazette, 14 Feb 2019, p.461-462) on BHP's 2019 proposed expansion of underground mining at Olympic Dam provides an important opportunity for the State of SA to ensure a 100% bond is applied and secured in advance.

The Guidelines for the EIS Assessment must require the relevant studies are conducted by BHP and are subject to public scrutiny in this EIS process prior to the approval or the advance of any new Tailings Storage Facility or expansion of production of radioactive tailings waste.

BHP must now be required to provide a costed Tailings Disposal Plan addressing full rehabilitation liabilities across all existing and proposed expansion operations at Olympic Dam.

Recommendations:

BHP must lodge a bond to cover 100% of rehabilitation liabilities at Olympic Dam:

The Guidelines to the required EIS Assessment of a proposed mine expansion must mandate a statutory 100% unconditional bond is secured to cover estimated rehabilitation liabilities to ensure that the full costs of remediation and decommissioning across all Olympic Dam operations.

This 100% Bond should be secured by the SA government in the first instance. Alternatively, it must be secured directly by the federal government under the EPBC Act.

The Guidelines must require that BHP conduct relevant studies and release full contemporary cost estimates of mine rehabilitation, decommissioning and remediation work for the full rehabilitation liabilities across Olympic Dam operations for public consultation in the EIS process.

These studies must include a costed Mine Closure Plan and Tailings Disposal Plan to be based on the prerequisites required by a comprehensive Safety Risk Assessment of all Olympic Dam mine tailings.

Modern environmental practice and community expectations require the Guidelines to set a comprehensive Safety Risk Assessment to determine the long-term (in the order of 10,000 year) risk to the public and the environment from all radioactive tailings produced and stored at Olympic Dam.

This approach is consistent with [federal EPBC Act Approval Condition 32 Mine Closure, Oct 2011](#).

Further, the federal government standards for disposal of radioactive ore tailings at the Ranger uranium mine in the NT need to be applied to Olympic Dam to ensure consistency with current best of sector approaches.

This is particularly important regarding the “*Environmental Requirements, Management of Tailings*” (1999) requirement “to ensure that:

- i) *The tailings are physically isolated from the environment for at least 10,000 years;*
- ii) *Any contaminants arising from the tailings will not result in any detrimental environmental impact for at least 10,000 years.”*

These studies and contemporary costings on rehabilitation liabilities across Olympic Dam operations are essential to determine the value of the bond needed to meet the full cost of implementation of BHP’s rehabilitation liabilities and to best ensure that none are left to the public as a legacy cost.

These studies and the proposed bond arrangement must be subject to public scrutiny in the EIS process prior to any new Tailings Storage Facilities or expansion of radioactive tailings output.