

**Australian Government****Department of Industry and Science**

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ABN: 74 599 608 295

Min ID: MC15-000244

s22

West Assessment Branch
Department of the Environment
GPO Box 787
CANBERRA ACT 2601

Dear s22

Thank you for your letter of 12 January 2015 regarding an invitation to comment on EPBC referral 2015/7416, concerning a proposal to increase the wall height of Tailings Storage Facility 4, Olympic Dam in South Australia.

BHP Billiton (the Proponent) proposes to extend the life of Tailings Storage Facility 4 (TSF4) by an additional five years by increasing the tailings storage capacity of the existing tailings cell. The existing TSF4 tailings cell is located on the Olympic Dam special mining lease, within the boundaries of the Olympic Dam mine site. TSF4 is expected to reach its current design height of 30m in December 2017. The proposed action is to increase the wall height to 40m to allow for the continued storage of tailings produced from the existing processing plant.

Raising the height of the TSF4 wall occurs on a continuous basis at a rate of between approximately 1-1.5 metres per year (with a maximum of 2 metres per year). Raising the wall height of TSF4 delays the need to construct an additional tailings cell. Activities required to raise the height of the TSF4 wall will be wholly located within the boundaries of the existing Olympic Dam mine site. Existing environmental management and mitigation measures employed at Olympic Dam will be maintained.

The Proponent's proposal to raise the height of the TSF4 to 40 meters wall is a continuation of existing operational procedures associated with the operation of the Olympic Dam site. Raising the embankment height of the TSF4 from the current height of 30m will not increase seepage rates. A minor impact will be an increase in the length of time that seepage occurs beneath TSF4, however, the TSF4 area and the geochemistry of the tailings liquid will remain unchanged. Geochemical modelling of seepage undertaken as part of the 2009 Environmental Impact Statement, modelled design heights of up to 65m. At these heights, the modelling indicated that post closure, percolation rates decrease, but remain elevated at levels slightly below predicted operational seepage rates for an estimated 150-250 years. The Proponent's commitment to limit

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the area extent of the pond and to ensure that the ground water table level does not exceed the 80m Australian Height Datum (AHD) remains unchanged.

The Department of Industry and Science (DoIS) in consultation with Geoscience Australia considers that while risks to groundwater, avian fauna and dam failure are issues of concern, groundwater in the vicinity of the operation is of poor quality and there will be no enlargement of available habitat to increase the TSF4's attractiveness to avian fauna.

Appropriately, the Proponent plans to mitigate any potential impact of the Action through its ongoing legal obligations described in its Environmental Protection and Management Program (EPMP). This includes assessing TSF4's performance to identify the potential for adverse environmental impact on soil and groundwater quality, and minimising available habitat.

The Proponent has identified and assessed several critical issues which require the highest level of diligence to maintain TSF4 stability and ensure its ongoing safety. To mitigate or manage potential impacts arising from dam failure, the Proponent has made appropriate undertakings regarding construction, monitoring and surveillance. The South Australian Department of State Development's engagement of O'Kane Consultants to undertake a third party design review provides additional assurance.

The Proponent clearly indicates that it considers this Action is not a controlled action under the EPBC Act. Significant impact on matters of national environmental significance are unlikely given existing mine approvals, EPMP requirements and the commitments made in the referral documentation.

DoIS in consultation with Geoscience Australia, is unaware of any geotechnical considerations and resource issues associated with the Proponent's application for increasing the wall height of TSF4 at Olympic Dam, South Australia that have the potential to impact on the matters protected under Part 3 of the *Environmental Protection and Biodiversity Conservation Act, 1999*.

Yours sincerely



Juliet Lautenbach
Manager, Minerals
Coal and Minerals Productivity Branch
Resources Division
Department of Industry and Science

22.1.15



Australian Government
Department of Health

Ref No. MC15-000490

s22

West Assessment Branch
Department of Environment
GPO Box 787
Canberra ACT 2601

Dear s22

Thank you for your correspondence of 15 January 2015 to the former Minister for Health and Minister for Sport, the Hon Peter Dutton MP, regarding the proposal to increase the wall height of Tailings Storage Facility 4 (TSF4) Olympic Dam EPBC 2015/7416 (the Proposal). Following a Ministerial reshuffle, the Hon Sussan Ley MP, was sworn in as the new Minister for Health and Minister for Sport on 23 December 2014. The Minister has asked me to reply.

The Department of Health is not in a position to provide information on the Proposal or a view on whether the Proposal will have a significant impact on matters protected under the *Environment Protection and Biodiversity Act 1999*.

The identification and response to health concerns associated with development proposals are a state and territory matter. I recommend, in this instance, you approach the South Australian Department of Health for comment on the Project.

Yours sincerely

Graeme Barden
Assistant Secretary
Health Protection Policy Branch
23 January 2015

From: s22
To: s22
Cc: [\\$ARPANSA Parliamentary Correspondence](#); s22
Subject: ARPANSA comments on referral EPBC 2015/7416. [SEC=UNCLASSIFIED]
Date: Monday, 2 February 2015 3:54:48 PM
Attachments: [Incoming Z1500 EPBC Referral 2015 7416 Olympic Dam Wall Tailings.pdf](#)
[Outgoing - Wyndham EPBC 2015-7416.pdf](#)

Hi s22

I attach ARPANSA's response to EPBC Referral 2015/7416 (together with your incoming correspondence) for your consideration.

Kind regards,

s22

Parliamentary & Government Relations - CEO Office

Australian Radiation Protection and Nuclear Safety Agency

3-5 National Circuit, Barton, ACT, 2600

Phone +61 3 9433 s22

Mobile: s22

email s22 [arpansa.gov.au](mailto:s22@arpansa.gov.au)

<http://www.arpansa.gov.au>

From: s22
Sent: Wednesday, 28 January 2015 11:19 AM
To: s22
Cc: s22
Subject: ARPANSA comments on referral EPBC 2015/7416. [SEC=UNCLASSIFIED]

Hi s22

Left a message before.

Just touching base regarding ARPANSA comments on **EPBC 2015/7416: Olympic Dam, Increasing wall height of tailings storage facility (TSF4)**.

Does ARPANSA have any comment on this referral?

Regards,

s22

Assessment Officer

South West Section

West Assessment Branch

Department of the Environment

GPO Box 787 Canberra, ACT 2601

Phone: 02 6275 s22

s22 @environment.gov.au

<http://www.environment.gov.au/epbc/index.html>



The Hon Peter Dutton MP
Minister for Health
House of Representatives
Parliament House
Canberra ACT 2600

Date: 12 January 2015
EPBC Ref: 2015/7416
EPBC contact: s22
(02) 6274s22
s22 @environment.gov.au

Dear Minister

**Invitation to comment on referral
Increasing the wall height of Tailings Storage Facility 4 (TSF4) Olympic Dam, SA**

I am writing to you in relation to consultation on actions being assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

We have received a referral of a proposed action from BHP Billiton Olympic Dam Corporation Pty Ltd to increase the wall height of the Tailings Storage Facility number 4 (TSF4), Olympic Dam, South Australia, for consideration under the EPBC Act.

We are currently undertaking an assessment to decide whether this proposed action requires approval under the EPBC Act before it can proceed. The referral may be viewed or copied from the Department's website, www.environment.gov.au/epbc.

As a delegate of the Minister for the Environment, I am writing to invite you to provide any relevant information as to whether you consider the proposed action is likely to have a significant impact on any of the matters protected under the EPBC Act.

In accordance with the EPBC Act, we need to receive your response by 23 January 2015. Please quote the title of the action and EPBC reference, as shown at the beginning of this letter, in any correspondence. You can send information to the Department:

by letter

s22

West Assessment Branch
Department of the Environment
GPO Box 787
CANBERRA ACT 2601

by email

s22

@environment.gov.au

by fax

(02) 6274 1620

If you have any questions about this process, please contact s22 and quote EPBC 2015/7416.

For your information, the Department has recently published an *Environmental Impact Assessment Client Service Charter* (the Charter) which outlines the Department's commitments when undertaking environmental impact assessments under the EPBC Act. A copy of the Charter can be found at: <http://www.environment.gov.au/epbc/publications/index.html>.

Yours sincerely



s22

Referrals Gateway Section



2 February 2015

s22

West Assessment Branch
Department of the Environment
GPO Box 787
CANBERRA ACT 2601

s22 environment.gov.au

Dear s22

I refer to your letter of 12 January 2015 to the Minister for Health, the Hon Peter Dutton MP, inviting comment on referral (EPBC 2015/7416) - Olympic Dam - increasing wall height of tailings storage facility (TSF4), as lodged by BHP Billiton Olympic Dam Corporation Pty Ltd. This matter falls within the portfolio responsibility of the Assistant Minister for Health, Senator the Hon Fiona Nash. The Assistant Minister has asked me to reply on her behalf.

The purpose of this communication is to provide information relevant to the assessment as to whether the proposed action is likely to have significant impact on any matters protected under the *Environmental Protection and Biodiversity Act 1999* (the EPBC Act).

The existing operation at Olympic Dam, comprising of an underground mine, mineral processing plant, tailings storage facilities and associated infrastructure, is considered a “nuclear action” under Section 22(1) of the EPBC Act¹. The proposed action by the proponent will be incorporated into this existing controlled operation.

The proposed action is to increase the tailings storage capacity of the existing tailings cell, Tailings Storage Facility number 4 (TSF4), for an additional five years. TSF4 is expected to reach its current design height of 30 metres by December 2017. The proposed action would increase the wall height to 40 metres for the continued storage of tailings produced from the existing process plant.

The proponent has determined that the increase in the wall height of TSF4 is not expected to result in any change to the level of environmental radiological emissions or to individual occupational exposure. However, in the referral documentation, the proponent does not provide clear evidence on how it has derived these conclusions.

The proponent states that it has well established processes in place to monitor environmental risks, including radioactive waste. Control of these risks is defined in a Tailings Retention System Management Plan and a Tailings Retention System Operation, maintenance and

¹ Section 22(1) of the EPBC Act defines a “nuclear action” as involving the “mining or milling of uranium ore;” and/or the establishment of or significant modifications to a “large-scale disposal facility for radioactive waste”

surveillance manual. The proponent states that it applies independent annual auditing to ensure that the required controls are being implemented correctly and regular monitoring will track any changes in the embankments of TSF4.

In addition the proponent states that its Rehabilitation and Closure Plan for the Olympic Dam Operation will be updated to reflect the changes (if any) required by an increase in the height of TSF4.

As the TSF4 wall raise is a continuation of existing operational procedures and contained within the existing Olympic Dam site, measures to avoid or reduce impacts are based on those that have already been successfully implemented and managed by the proponent since operations began.

The proponent has discussed several alternatives to raising the wall of TSF4. One of these is a new tailings cell. The reasons for rejecting this alternative are given as:

- increased environmental impacts resulting from land clearing and greater surface area of tailings; and
- significant capital cost.

However, the proponent then asserts that increasing the design height of TSF4 delays the requirement for an additional tailings cell by approximately five years. At this time these problems will have to be overcome anyway.

There is no mention in the referral of proposed measures to mitigate the effects of overflow resulting from heavy rainfall events.

An operation of this type always has the potential to have a significant impact on the environment. The documentation provided to us does not contain enough quantitative information to advise definitively on the likelihood of significant impact on the environment.

Please contact s22 on (03) 943 s22 or s22 arpana.gov.au if you have any questions regarding this matter.

Yours sincerely



Professor Peter Johnston
Acting CEO of ARPANSA

From: s22
To:
Subject: FW: Invitation to comment on Referral - (EPBC 2015/7416) Increasing the wall height of Tailings Storage Facility 4 (TSF4) Olympic Dam, SA [SEC=UNCLASSIFIED]
Date: Monday, 19 January 2015 1:59:18 PM

From: s22 @defence.gov.au
Sent: Monday, 19 January 2015 1:40 PM
To: s22
Cc:
Subject: RE: Invitation to comment on Referral - (EPBC 2015/7416) Increasing the wall height of Tailings Storage Facility 4 (TSF4) Olympic Dam, SA [SEC=UNCLASSIFIED]

UNCLASSIFIED

Hi s22

No comment from Defence about this referral.

Regards

s22

Environment Protection and Assessment
Environment and Engineering Branch
Defence Support Group

Phone: 02 6266 s22 Email s22 @defence.gov.au



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From: EPBC Referrals [<mailto:xxxx.xxxxxxxxxx@xxxxxxxxxxxx.xxx.xx>]
Sent: Friday, 9 January 2015 16:46
To: s22
Subject: Invitation to comment on Referral - (EPBC 2015/7416) Increasing the wall height of Tailings Storage Facility 4 (TSF4) Olympic Dam, SA [SEC=UNCLASSIFIED]

Good afternoon

We are sending you the attached link to a referral received for consideration under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) for your comments, as it falls within your area of interest: http://www.environment.gov.au/cgi-bin/epbc/epbc_ap.pl?name=current_referral_detail&proposal_id=7416

Proposal is within 10 kilometres of Woomera Weapons Range

Any comment should be sent by 23 January 2015 via:

by letter s22

s22

South West Assessment Branch
Department of the Environment
GPO Box 787
CANBERRA ACT 2601

by email
by fax

s22

[environment.gov.au](mailto:s22@environment.gov.au)
(02) 6274 1620

Formal notification has been sent in the postal mail.

Regards

s22

Referrals Gateway Section
Queensland & Sea Dumping Assessment Branch
Department of the Environment



Government of South Australia

Department of Environment,
Water and Natural Resources

REF 33/15/0004

Executive Director
Conservation and
Land Management

Level 3
25 Grenfell St
Adelaide SA 5000
GPO Box 1047
Adelaide SA 5001
Australia
DX138

Date: 22/1/15

s22

West Assessment Branch
Department of the Environment
GPO Box 787
CANBERRA ACT 2601

Dear s22

**Re: 2015/7416 Increasing the wall height of Tailings Storage Facility 4 (TSF4),
Olympic dam, SA**

I write on behalf of the South Australian Government regarding your invitation to comment on the above referral received by the Australian Government Department of the Environment (AG DotE) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The South Australian Government advises the following in relation to the proposed action:

State Assessment

The South Australian Government has been in discussions with BHP Billiton for several months regarding this proposal, which it formally submitted to the state on 5 November 2014. All indications to date from the state assessment of the proposed increase in wall height of TS4 point to the activity not causing significant additional environmental impacts to the receiving environment from the environmental risks identified in the referral (s4.1).

Matters of National Environmental Significance (NES)

The South Australian government has no comments to make in relation to any particular matter of NES, however wishes AG DotE to note the following in relation to this referral:

- It is expected that the proposed change in activity is unlikely to change the level of impact to listed and migratory bird species that habituate or visit the site compared to the current operation, as the activities associated with the potential impacts to these species will not be changing. However, it is worth noting the following regarding BHP Billiton's consideration of the significance of impacts to avifauna listed under the EPBC Act:

- the four bird species considered in the referral as having their habitat affected by the facility or likely to interact with the tailings, are only occasional visitors or not previously recorded at the site; and
- Section 4 of the referral would have benefited from the proponent referencing management controls in place, as defined in the Tailings Retention System Management Plan, to demonstrate how impacts to avifauna are being managed to avoid a significant impact.

Environmental Assessment

If the Australian Government decides that the proposed action is a controlled action then it is recommended that the assessment approach should be on Referral Information or Preliminary Documentation; an assessment approach that will be able to take into account as much as possible the detailed assessment that is currently being finalised by the State.

For further information please contact the SA EPBC Act Referral Team, in particular s22 on (08) 8463 s22 or e-mail: DLDEWNREPBCReferrals@sa.gov.au.

Yours Sincerely



Brenton Grear
EXECUTIVE DIRECTOR