

STATEMENT OF REASONS

Section 69(1)(a) of the *Environment Protection Act 2019* (EP Act)

Environmental approval holder	PNX Metals Limited ACN 127 446 271 ABN 67 127 446 271
Environmental approval number	EP2022/021-001
Action	Fountain Head Gold Project - to recommence mining of the Fountain Head open pit, on mineral leases approximately 170 km south of Darwin in the Victoria Daly Region and wholly within the pastoral property of Ban Ban Springs on Parcel 695 (Burrundie).
Material considered	Northern Territory Environment Protection Authority (NT EPA) advice received on 3 January 2023 and amended advice received on 11 January 2023. <ul style="list-style-type: none">• Assessment Report 97• A draft environmental approval setting out conditions recommended to apply• Fit and proper person advice – signed declaration.
Decision	In accordance with sections 69(1)(a) and 82(4)(a) of the EP Act, I accept the draft environmental approval, adopt the proposed conditions of the NT EPA and grant the approval.

REASONS

This statement of reasons has been prepared in accordance with sections 82(3) and 82(4) of the EP Act.

Nature of the action

PNX Metals Limited (approval holder) submitted a Notice of Intent for the Fountain Head Gold Project (action) to the Northern Territory Environment Protection Authority (NT EPA) on 20 December 2019, for consideration under the Environmental Assessment Act 1982 (EA Act).

The action is to dewater the existing flooded Fountain Head Pit void, expand the pit to a depth of 160 m by drilling and blasting, recommence mining of the Fountain Head Pit and construct new infrastructure to enable gold production from the mined resource.

Scale of the action

The action is wholly within the pastoral property of Ban Ban Springs on Parcel 695 (Burrundie), and on contiguous mineral leases ML31124, MLN1020, MLN1034, and MLN4 in the Victoria Daly Region.

Objects of the EP Act

I have had regard to the objects of the EP Act. I note in particular that through the environmental impact assessment of the action and the granting of the environmental approval, significant adverse impacts on the Territory environment are likely to be avoided and the protection and management of the Territory environment have been promoted. I also note the opportunity provided to the community for involvement in the environmental impact assessment of the action.

Environmental context

The action is situated in the upper reaches of the Adelaide River Catchment. The catchment has a diversity of habitats and significant environmental flows through to extensive freshwater and marine coastal floodplains and nationally significant wetlands.

Environmental values which require protection from the action include terrestrial groundwater dependant ecosystems (GDE) and a perennial billabong and small waterhole that is a recorded sacred site. The billabong is located along the unnamed creek and is recognised as an aquatic GDE.

Principles of environment protection and management

In considering Part 2 (Principles of environment protection and management) of the EP Act, I have considered the meaning of ecologically sustainable development (ESD) and applied each of the principles of ESD. I have reviewed the NT EPA's consideration of the principles of ESD as summarised in Assessment Report 97. I have considered and weighed all the principles of ESD in making my decision.

I have considered and applied the hierarchies for environmental decision making and waste management. I have given particular consideration to the application of the environmental decision making hierarchy, and proposed measures to avoid, and then mitigate and manage potential adverse impacts on the environment.

I am satisfied that through compliance with the environmental approval, the action is consistent with the ESD principles and the management hierarchies.

Potential impacts

Seven environmental factors were identified as having the potential to be significantly impacted by the action:

1. Hydrological processes

The riparian vegetation along the unnamed tributary creek to the north of the action, as well as the Margaret River are classified as having a moderate potential of being terrestrial GDEs based on a reliance on groundwater.

As a result of dewatering the flooded Fountain Head pit to commence safe mining of the pit to a final depth of 160 m, there will be a drawdown of the groundwater around the pit which has been described by the approval holder that radiates up to 1,000 m beyond the pit boundary. The drawdown extent at end of mining will be around 0.5 to 1.0 m affecting a 1,000 m section of the unnamed creek downstream of the action.

Post-mining, the recovery/rebound of the water table and pit water level is predicted to form a permanent pit lake. As the pit fills, potentially acid forming material placed at the bottom of the pit and reactive wall rock is likely to interact with water to produce leachate.

As a groundwater through-flow system is expected to be restored, there is potential for contaminant transport and potential impact to inland water environmental quality and downstream ecological values.

The approval holder is required in condition 5 to protect the quality of groundwater and surface waters so environmental values that includes cultural values are maintained.

2. Inland water environmental quality

To reduce the potential for water quality impacts to acceptable levels, conditions 7 and 8 ensures that mined materials are properly characterised and managed, and erosion that could result from changes to altered surface flows and hydrology is adequately controlled for the life of the action through implementation of an approved erosion and sediment control plan. Stormwater runoff from disturbed land during implementation of the action could result in impacts on downstream water quality and aquatic ecosystems.

I am satisfied that the requirements established under condition 5 and 6 ensures the design, construction and management of the key infrastructure is leading practice in the mining industry, and seepage of leachate is limited and can be managed through the use of low permeability liners.

I note that any material change to the shape of a waterway, change to the volume, speed or direction of the flow, or likely flow of water in or into a waterway, or alteration to the stability of the bed or banks of a waterway is interference with a waterway, and would be regulated under the *Water Act 1992*.

3. Aquatic ecosystems

The aquatic ecosystem values in the zone of influence of the action are associated with the perennial billabong, approximately 2.5 km downstream of the action and ephemeral water within the unnamed tributary creek. The billabong is recognised as having a high potential of being an aquatic GDE and therefore may be reliant on groundwater to maintain its ecological integrity and functioning.

The GDEs are protected by restricting the limit of groundwater drawdown to <1.0 m at the confluence of the southern waterway and the unnamed creek, implementation of a trigger action response plan (TARP), and a program of environmental monitoring and reporting through conditions 9, 15 and 16.

4. Terrestrial ecosystems

The action is within a region that has been subject to extensive mining and exploration, and disturbances from historical mining activity is evident within the action extent. However, there is potential for further soil contamination as a result of implementing the action.

This could occur at the mining stage through fugitive emissions (spray droplets) from evaporators used for dewatering the pit, via seepage from mine waste (waste rock and tailings) or chemical spills. Post mining, this could occur through incomplete remediation, rehabilitation or restoration activities, and implementation of closure requirements under an approved mine closure plan (MCP).

I am satisfied that impacts can be avoided or mitigated through effective erosion and sediment control (condition 8), and if required at the end of mining, contaminated areas will be assessed, and remediation and rehabilitation will be according to the National Environment Protection (Assessment of Site Contamination) Measure 1999 (ASC NEPM 1999) and the National Remediation Framework (NRF) (CRC CARE 2018).

Condition 4 ensures that the quality and integrity of the land and soils of the Adelaide River Catchment is effectively protected.

5. Community and economy

The action is located in a relatively remote rural area where the land uses have historically been cattle grazing, mining and mineral exploration. Implementation of the action could result in impacts to the community through increases in local traffic.

Significant economic and community benefits could also occur through increased social and economic activity, and there would be opportunities for local employment. I am satisfied that regulation under the *Mining Management Act 2001* would ensure that benefits to the community and economy are maximised.

6. Culture and heritage

Sacred sites are protected under the *Northern Territory Aboriginal Sacred Sites Act 1989* and PNX Metals Limited holds an Aboriginal Areas Protection Authority (AAPA) Authority Certificate to avoid the potential for biophysical impacts to sacred sites. I am satisfied that the approval holder will comply with the requirements of the Authority Certificate issued by AAPA for the action.

The risk of impacts to sacred sites can be effectively mitigated by ensuring that surface water is managed according to the approved water management plan and regulation under the *Mining Management Act 2001*. Additionally, condition 5 ensures that environmental values including ecological health, land uses, and cultural values are maintained, and the quality of groundwater and surface water are protected.

Fit and proper person

I have had regard to whether the Chief Executive Officer (CEO) of PNX Metals Limited is a fit and proper person to hold an environmental approval. I consider PNX Metals Limited to be a fit and proper person to hold an environmental approval.

Section 73(2) of the EP Act

Overall, having regard to the above and the materials I considered, I am satisfied that:

- the community has been consulted on the potential environmental impacts and environmental benefits of the proposed action through the consultation process on the terms of reference for an Environmental Impact Statement and Environmental Impact Statement; and
- significant impacts of the action have been appropriately avoided or mitigated or can be appropriately managed to acceptable levels through compliance with the environmental approval. The NT EPA's Assessment Report supports this view.

No significant residual adverse impacts on the environment were identified that would require an environmental offset.



Signature

Hon Lauren Moss MLA

Minister for Environment, Climate Change and Water Security

DATE 15/2/2023