

Environmental Protection Act 1994

Environmental Protection Order

This environmental protection order is issued by the administering authority pursuant to section 358 of the Environmental Protection Act 1994.

Capricorn Copper Pty Ltd (ACN 106 396 801)
Level 2, 150 Collins Street
Melbourne, VIC, 3000

Your reference: E-100366506

Our reference: 101/0008746, C-CPLRC-100365980

13/01/2023

Dear Sir/Madam

Take notice: that under the *Environmental Protection Act 1994* (the Act) this environmental protection order (EPO) is issued to Capricorn Copper Pty Ltd ACN 106 396 801 (hereafter referred to as 'you') by the administering authority. The administering authority is the Chief Executive of the Department of Environment and Science (the department).

The EPO is issued in respect to your activities at the Capricorn Copper Mine (the Site), undertaken on the mining leases specified on environmental authority EPML00911413 (the EA).

A. Grounds

This EPO is issued on the following grounds:

1. The department requires you to take reasonable measures to secure compliance with the General Environmental Duty. The General Environmental Duty is detailed in s319 of *the Act* which states the following:
*'A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practical actions to prevent or minimise the harm (the **general environmental duty**).'*
2. The department requires you to take reasonable measures to secure compliance with condition G5-2 of the EA, dated 30 September 2022, which states:
'By 1 November of each year, storage capacity must be available in each regulated dam, to meet the Design Storage Allowance (DSA) volume for the dam.'
3. The department requires you to take reasonable measures to secure compliance with condition G5-4 of the EA, dated 30 September 2022, which states:



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'The holder must, immediately on becoming aware that a regulated dam will not have the available storage to meet the DSA volume on 1 November of any year, act to prevent the occurrence of an unauthorised discharge from the regulated dam.'

4. The department requires you to take reasonable measures to secure compliance with condition G4-3 of the EA, dated 30 September 2022, which states:

'The holder must, immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised discharge from the regulated dam.'

5. The department requires you to take reasonable measures to secure compliance with condition G8-1 of the EA, dated 30 September 2022, which states:

'Each regulated dam listed in Schedule G – Table 1 (Regulated Dams) must meet the hydraulic performance criteria listed in Schedule G – Table 1 (Regulated Dams) for that structure.'

The facts and circumstances forming the basis for these grounds are:

1. You are the holder of the EA which authorises mining activities at the Site.
2. You undertake various activities at the Site pursuant to the EA, including mining copper ore and mineral processing.
3. There is significant risk of environmental harm associated with the mining activities, including the storage of a substantial volume of contaminated water within the regulated dams referred to as Esperanza Pit (EPit) and Mill Creek Dam (MCD), which has the potential to cause material or serious environmental harm if released in an uncontrolled manner to the receiving environment.
4. The department has previously issued a number of other EPOs to you seeking improved water management practices at the Site, including most recently on 20 September 2021 (EPO E-100127178).
5. The EA sets the minimum standards and conditions which must be complied with, such that the risk is managed appropriately. These include:
 - a) Schedule G – Table 1 (Regulated Dams), which lists authorised regulated dams on the Site, including Esperanza TSF, EPit and MCD.
 - b) Condition G5-2, which requires storage capacity to be available in each regulated dam by 1 November each year to meet the Design Storage Allowance (DSA), being the amount of available volume required in order to prevent a discharge from that dam up to a specified annual exceedance probability (AEP) wet season.
6. The current EA, effective 30 September 2022, specifies that the DSA levels for EPit and MCD are 207.7 m AHD and 216.1 m AHD, respectively.
7. You advised that, on 1 November 2022, the water level of EPit was 214.969 m AHD, exceeding the relevant DSA.
8. Water levels of EPit and MCD were surveyed on 2 November 2022 by a registered surveyor on behalf of the department and were confirmed to be 215.03 m AHD and 215.81 m AHD, respectively.
9. Failure to achieve DSA by 1 November of any year presents an unacceptable risk of an unauthorised contaminant release.
10. The current EA, effective 30 September 2022, specifies that the MRL levels for EPit and MCD are 217.9 m AHD and 217.7 m AHD, respectively.
11. On 5 January 2023, you advised that the water level of EPit was 218.116 m AHD, exceeding the relevant MRL.

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12. The max operating level for EPit is 222 m AHD, which is the maximum level for which the EPit is authorised to be used as a water storage structure. Exceedance of the max operating level would constitute contravention of EA condition G8-1.
13. On 5 January 2023, you advised that the water level in MCD was 216.156 m AHD and was below the relevant MRL. Pumping of water from MCD to EPit will likely continue to be required to maintain this level.
14. CCPL have not advised the department of any material measures for reducing the Site's water inventory over the course of the 2022-23 wet season, other than enhanced evaporation (which can have limited effectiveness during periods of wet weather) or the use of the Site's Water treatment Plant to treat and release water at a rate of approx. 260 m³/hr.
15. The Site has continued to accumulate contaminated water over the course of the 2022-23 wet season to date (since 1 November 2022), suggesting the water management measures adopted to date have not been sufficient.
16. On 6 December 2022, the department requested a copy of the current Water Management Plan for the Site. On 15 December 2022, you provided a copy of a document titled 'Capricorn Copper Mine Wet Season Management Plan'. The department has reviewed this document and identified that it is currently inadequate to ensure that proper and effective measures, practices and procedures are in place to manage potential environmental impacts resulting from the mining activity.
17. North-west Queensland is known to experience variable annual and seasonal rainfall. The 2022-2023 wet season is predicted by the Bureau of Meteorology to bring above average rainfall and potential impacts from tropical cyclones. Extreme rainfall events pose significant water management challenges and increase risk of mass water accumulation and uncontrolled releases from the Site.
18. Historically, January and February experience the highest rainfall in north-west Queensland, however, significant rainfall could reasonably be expected throughout March and April.
19. Water quality sampling undertaken on 2 November 2022 identified that water quality within EPit and MCD is characterised by low pH and elevated electrical conductivity, sulfate and copper. Without treatment, water from these structures would not be suitable for discharge to the receiving environment.
20. The GED requires that the mining activities at the Site must not be carried out unless all reasonable and practicable measures to prevent or minimise environmental harm are taken.
21. The department considers that further reasonable and practicable measures are required to secure compliance with the EA and ensure an effective water management system is in place to prevent or minimise the potential for environmental harm.

B. Requirements

In accordance with this EPO, you are required to do the following:

1. Prevent any Unauthorised Release from EPit or MCD.
2. On and from the date of this EPO, you must take the following steps:
 - a) retain Suitably Skilled and Competent Persons to design, oversee and regularly review the performance of the water management system and updated water management arrangements in place; and
 - b) have in place sufficient plant, equipment, infrastructure, resources and personnel to ensure the competent management of the Site water inventory; and

- c) have in place a sufficient number of high efficiency evaporation units and take all reasonable steps to ensure such units are operating as required; and
- d) have in place a competent site-specific water treatment system and take all reasonable steps to ensure such system is operating as required; and
- e) have in place a suitably sized network of pumps and pipes, to allow for the transfer of water across the water management system and for the controlled release of treated water during Authorised Release conditions; and
- f) minimise the capture of uncontaminated water from clean catchments, through suitably sized and installed diversions and any associated pumping systems; and
- g) minimise the importation of water to the Site from Lake Waggaboonya (as distinct from water used for Critical Purposes).

Wet Season Management and Contingency Plan

- 3. Develop an updated Wet Season Management and Contingency Plan for the current 2022/2023 wet season and submit to the department by no later than 5:00pm on 27 January 2023.
- 4. The Wet Season Management and Contingency Plan must:
 - a) be developed by a Suitably Skilled and Competent Person; and
 - b) identify wet season triggers with consideration of rainfall received, forecast weather, onsite water storage levels, quality of stored water, and regulated structure mandatory reporting levels and max operating levels; and
 - c) identify actions that will be taken in response to different triggers, including escalating preparations for subsequent triggers; and
 - d) detail current onsite water quality and treatment options considered and made available during the wet season; and
 - e) detail discharge plans for release of treated water in accordance with EA conditions, including water source, water treatment, pump and pipe infrastructure, and notification of stakeholders procedure; and
 - f) include a contemporary spill risk analysis for relevant regulated structures; and
 - g) outline controls to prevent any Unauthorised Release from the Site.

Water Balance Model

- 5. On and from the date of this EPO, you must maintain an accurate water balance model capable of being run at two business days' notice, to provide updated spill risks, and forward predicted storage volumes at appropriate intervals in EPit and MCD.
- 6. You must provide the forward trajectory water balance model maintained in accordance with requirement 5 of this EPO, and an associated report for the Site, to the department:
 - a) on 28 April 2023; and
 - b) within 72 hours after a request by the department.
- 7. The water balance report provided in accordance with requirement 6 of this EPO must, at a minimum, include the following information:
 - a) the technical criteria on which the assessment has been based; and

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- b) the relevant data and facts on which the assessment has been based and the source of that material.

EPit and MCD Water Levels

- 8. On and from the date of this EPO, if the water level in MCD is at or above 217.7 m AHD, you must:
 - a) undertake pumping to transfer water from MCD to EPit as required to prevent an Unauthorised Release; and
 - b) cease the importation of any water to the Site from Lake Waggaboonya or any other source, except where the water is used for Critical Purposes; and
 - c) when Background Flow exceeds 3 Cumecs, undertake the Authorised Discharge of suitably treated water at an average rate of at least 260 m³/hr.
- 9. On and from the date of this EPO, if the water level in EPit is at or above 222 m AHD, you must:
 - a) cease the importation of any water to the Site from Lake Waggaboonya or any other source, except where the water is used for Critical Purposes; and
 - b) when Background Flow exceeds 3 Cumecs, undertake the Authorised Discharge of suitably treated water at an average rate of at least 260 m³/hr.

Reporting and Records

- 10. You must provide a report to the department every 2 calendar weeks while this EPO remains in force. The report must, for the relevant reporting period, contain the following information at minimum:
 - a) summary of all actions taken to comply with each requirement of this EPO; and
 - b) the water quality (measured at a minimum frequency of once every calendar week), level of stored water (in m AHD as measured each day) and the estimated available storage volume (in Megalitres) in each Regulated Dam; and
 - c) rainfall data; and
 - d) details of the volume of water imported to the Site from Lake Waggaboonya on each day; and
 - e) details of water treated including Water Treatment Plant throughput and Reverse Osmosis Plant throughput; and
 - f) records of any Authorised Discharge/s undertaken including:
 - i. the date and time for both the commencement and cessation of the release event; and
 - ii. the total daily volume (in Megalitres/day) and rate (in m³/hour) of waters released; and
 - iii. receiving waters Background Flow (in m³/hour) immediately upstream of the authorised release point for the duration of the release event.
- 11. You must keep all records in relation to this EPO and provide such records to the department within 72 hours after a request by the department.

Definitions

- 12. The following definitions apply to this EPO:

- a) 'Authorised Discharge' means, when required by this EPO, the release of suitably treated water that complies with all conditions of environmental authority EPML00911413, with the exception of the following:
- i. In relation to EA condition C3-1; only in the event that safe access to GPU1 is unavailable, GPA2 monitoring results may be used as a proxy (for GPU1) and records must be kept to document when and why there was no safe access to GPU1; and
 - ii. In relation to EA condition C3-1; GPA5 samples may be collected as close to this monitoring location as practicable when there is no safe access and records must be kept to document when and why there was no safe access to GPA5.
- b) 'Background Flow' means streamflow in Gunpowder Creek upstream of the Mt Oxide Rd Causeway, measured in Cumecs at recorded time intervals not exceeding 60 minutes.
- c) 'Critical Purposes' means water used exclusively for drinking/personal hygiene or to meet emergency management or health and safety obligations.
- d) 'Cumecs' means cubic metres per second.
- e) 'Mt Oxide Rd Causeway' means the causeway on Mt Oxide Road that spans Gunpowder Creek adjacent to the Site and is located at S 19°41'19.57" (latitude) E 139°21'23.96" (longitude).
- f) 'Regulated Dam' means, for the purposes of this EPO, the Esperanza Pit (or 'EPit'), Mill Creek Dam (or 'MCD') and the Esperanza TSF as defined in environmental authority EPML00911413.
- g) the 'Site' means the Capricorn Copper Project located on the mining leases specified on environmental authority EPML00911413, located approximately 120 kilometres north-west of Mount Isa in the State of Queensland.
- h) 'Suitably Skilled and Competent Person' means a person who has professional qualifications, training and experience relevant to the nominated subject matter, who can give authoritative assessment, advice and analysis on performance relative to the subject matter using relevant protocols, standards, methods and literature.
- i) 'Unauthorised Release' means any release of contaminants other than an Authorised Discharge, as defined by this EPO.

C. Obligations

If you propose to dispose of the place or business to which the EPO relates, you **must** advise the buyer of the existence of this EPO.

If you cease to carry out the activity to which this EPO relates, you **must** give written notice of ceasing to carry out the activity to the department within 10 days of ceasing the activity.

Take notice:

- the requirements of this order take effect immediately upon service of the order;
- failure to comply with this order is an offence under the Act;
- this order remains in force until **1 May 2023**.

D. Penalty

Failure to comply with an EPO is an offence.

- The maximum penalty for wilfully contravening an EPO is 6250 penalty units, totalling \$ 898,437 or five years imprisonment for an individual or \$ 4,492,187 for a corporation.
- The maximum penalty for contravening an EPO is 4500 penalty units, totalling \$ 646,875 for an individual or \$ 3,234,375 for a corporation.

Failure to provide written notice to the buyer of the existence of the order is an offence.

- The maximum penalty is 50 penalty units, totalling \$ 7,187 for an individual or \$ 35,937 for a corporation.

Failure to provide written notice to the department within 10 business days of ceasing the activity to which an environmental protection order relates is an offence.

- The maximum penalty is 50 penalty units, totalling \$ 7,187 for an individual or \$ 35,937 for a corporation.

Section 3 of the *Penalties and Sentences Regulation 2015* prescribes the monetary value of a penalty unit.

E. Reviews and appeals

The provisions regarding reviews of decisions and appeals are found in sections 519 to 539 of the Act.

A person who is dissatisfied with an original decision made by the Department of Environment and Science (the department) may apply to have that decision internally reviewed.

Information about initiating an appeal in relation to this notice is contained within the [Internal Reviews and Appeals Information Sheet](#) (available at www.qld.gov.au using the publication number ESR /2015/1742 as a search term)

A request for review or appeal is to be made using the approved form '[Application for review of original decision](#)' (available at www.qld.gov.au using the publication number ESR/2015/1573 as a search term.

Applications for reviews are to be sent to Permit and Licence Management, Department of Environment and Science: via email at palm@des.qld.gov.au , or by mail to the following address: GPO. Box 2454, Brisbane, QLD, 4001.

Where an application has been made for a decision to be reviewed, the applicant may also apply to the relevant court for a stay of the decision to secure the effectiveness of the review.

Once the original decision has been reviewed, a person who is dissatisfied with the review decision may be able to appeal against that decision to the relevant court within 22 business days after receiving notice of the review decision.

A person whose interests are or would be adversely affected by a decision of the department may be able to request a statement of reasons for a decision or a statutory order review under the *Judicial Review Act 1991*.

You may have other legal rights or obligations and should seek your own legal advice.

Pursuant to section 540 of the Act, the department is required to maintain a register of certain documents and information authorised under the Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able take extracts, or copies of the documents from

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the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the Act. There is no general discretion allowing the department to withhold documents or information required to be kept on the public register. For more information on the department's public register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

Should you have any queries in relation to the notice, please contact Kristen Corkill on (07) 4222 5161.



Signature

Jacob Toe
Delegate of the Chief Executive
Department of Environment and Science
Environmental Protection Act 1994



Date

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