

Notice

Environmental Protection Act 1994

Environmental Evaluation

Notice to conduct or commission an environmental evaluation

This notice to conduct or commission an environmental evaluation is issued by the administering authority pursuant to section 326B of the Environmental Protection Act 1994.

Diatreme Resources Limited
Unit 8,
55-61 Holdsworth Street,
COORPAROO, QLD, 4151

Reference: STAT1399

Wednesday, 21 August 2019

Take notice: that under the *Environmental Protection Act 1994* (the Act) a notice to conduct or commission an environmental investigation is issued to Diatreme Resources Limited (ACN 061 267 061) (you) by the administering authority. The administering authority is the Chief Executive of the Department of Environment and Science (the department).

The notice to conduct or commission an environmental investigation is issued in respect of the activities of Diatreme Resources Limited on land described as Mining lease [ML] 7094, ML7096 and ML7097 (the premises).

A. Grounds

The notice to conduct or commission an environmental investigation is issued on the following grounds:

The administering authority is satisfied on reasonable grounds that an activity or proposed activity is causing, or is likely to cause environmental harm.

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

1. You are the holder of **environmental authority EPML00820613 (EA)** and Mining leases [ML] 7094, ML7096 and ML7097 (the premise).
2. On 24 December 2018, you submitted monitoring data to the department, which depicted elevated levels of contaminants in both of the groundwater monitoring bores at the premise (Tick Hill Gold Project).
3. Elevated contaminants (which exceed water quality objectives for one or more of the environmental values stipulated in the *Environmental Protection [Water] Policy 2009* [EPP Water]) detected in monitoring bores include; cyanide, aluminium, arsenic, cobalt, copper, chromium, lead, manganese, molybdenum, nickel, zinc, calcium, selenium, uranium, vanadium, sodium, chloride and sulphate.
4. The following environmental values, are identified and declared under the EPP Water and may be impacted by the elevated levels of contaminants in groundwater:

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- (a) for high ecological value waters—the biological integrity of an aquatic ecosystem that is effectively unmodified or highly valued;
 - (b) for slightly disturbed waters—the biological integrity of an aquatic ecosystem that has effectively unmodified biological indicators, but slightly modified physical, chemical or other indicators;
 - (c) for moderately disturbed waters—the biological integrity of an aquatic ecosystem that is adversely affected by human activity to a relatively small but measurable degree;
 - (d) for highly disturbed waters—the biological integrity of an aquatic ecosystem that is measurably degraded and of lower ecological value than waters mentioned in paragraphs (a) to (c);
 - (e) for waters that may be used for producing aquatic foods for human consumption—the suitability of the water for producing the foods for human consumption;
 - (f) for waters that may be used for aquaculture—the suitability of the water for aquacultural use;
 - (g) for waters that may be used for agricultural purposes—the suitability of the water for agricultural purposes;
 - (h) for waters that may be used for recreation or aesthetic purposes, the suitability of the water for—
 - (i) primary recreational use; or
 - (ii) secondary recreational use; or
 - (iii) visual recreational use;
 - (i) for waters that may be used for drinking water—the suitability of the water for supply as drinking water;
 - (j) for waters that may be used for industrial purposes—the suitability of the water for industrial use;
 - (k) the cultural and spiritual values of the water.
5. Some contaminants may naturally exist at elevated concentrations in the receiving environment, however no background monitoring data has been provided to demonstrate that this is the case.
6. Cyanide is a contaminant which was used in mining activities at the Tick Hill Gold Project and is reported to be present at elevated levels in tailings.
7. Cyanide is not reasonably expected to be present in elevated concentrations in the receiving environment and its presence in groundwater indicates connectivity between mine features, including the tailings dam and groundwater.
8. The cyanide concentration detected in monitoring bores at the premises exceed the water quality objectives for several environmental values declared under the EPP Water.
9. Connectivity between mine features and groundwater is likely to act as a contaminant transport pathway for other contaminants.
10. The department is satisfied on reasonable grounds that contaminants are likely being released as a result of activities having been conducted on mining lease (ML) 7094, ML7096 and ML7097, and are causing, or are likely to cause environmental harm.

B. Requirements

The report on the environmental investigation must address the following relevant matters:

1. Develop a conceptual **groundwater** model that identifies all **groundwater** systems, which may be impacted on as a result of activities conducted under **environmental authority EPML00820613**, with reference to all **mine features**, depth to **groundwater**, and direction of **groundwater** flow.
2. Identify all contaminants potentially generated by **mine features**, including characterisation of materials contained in **mine features**.
3. Consider all **environmental values** and identify those that are potentially impacted. Consider **groundwater** migration, interaction with surface water, and any potential future use of the water.
4. By 21 April 2020, design and implement a **groundwater** monitoring program, capable of detecting and assessing impacts from **mining activities to groundwater**.

The **groundwater** monitoring program must include:

- a) Geographical locations and depths for reference and impact bores suitable to detect impacts from **mining activities** and differentiate any elevated contaminant levels from naturally occurring levels.
 - b) A comprehensive suite of contaminants, as identified by requirement 2.
 - c) A minimum of 8 sampling rounds over the duration of this investigation.
5. Identify the source(s) of all contaminants that are being, or have been released from **mine features to groundwater**.
 6. Identify and describe the pathways and mechanisms for the release and transport of contaminants to **groundwater from mine features**. Include a description of any existing barriers incorporated in **mine features** (eg. capping and lining of features containing contaminants) and assess their integrity.
 7. Estimate the current lateral and vertical geographical extents of contaminants released to **groundwater, from mine features**.
 8. To the extent necessary to prevent environmental harm, identify and prioritise potential options for
 - a) The prevention of further contaminant releases from the premises to **groundwater**; and
 - b) Remedial measures to reduce contaminant concentrations in **groundwater**.
 9. By 21 April 2020, and every six months thereafter, provide an update report to the department on the progress of the environmental evaluation. The first update report must include details of the groundwater monitoring program required by item 4.
 10. The final report must include:
 - a) The methodology applied in conducting this investigation, including any assumptions relied upon and their justification; and
 - b) A description of the conceptual model required by item 1; and
 - c) Details of the groundwater monitoring program, required by item 4; and
 - d) The results of all studies, assessments or analyses that were carried out during this investigation; and

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- e) The raw data for all results drawn upon in this investigation; and
 - f) Nomination of appropriate water quality objectives to determine if environmental harm is being caused; and
 - g) The outcomes and findings of this investigation, including justification for any conclusions.
11. The requirements of this investigation must be completed by, a **suitably qualified person**.
12. The final report on the environmental evaluation must be submitted to the department on or before 21 October 2021.
13. The following definitions apply to the requirements of the environmental evaluation:

Environmental authority EPML00820613 means the most recently approved environmental authority EPML00820613.

Environmental value is defined in section 9 of the *Environmental Protection Act 1994* -

- (a) A quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or
- (b) Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.

Groundwater means water stored underground in rock crevices and in the pores of geological materials that make up the earth's crust; water, that may supply springs and wells.

Mine features means the open cut pit, underground workings, tailings dam, waste rock dump, decant pond, exploration lines, costeans, borrow pits, infrastructure area or any other significant area of disturbance caused by mining activities.

Mining activities means all activities authorised under the *Mineral Resources Act 1989* conducted on Mining lease (ML) 7094, ML7096 and ML7097, including historic activities on ML7094, ML7096 and ML7097.

Suitably qualified person means a person who has demonstrable professional qualifications, training, skills and experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

The environmental investigation must be carried out, and the environmental report prepared by a suitably qualified person.

The environmental report must be submitted to the department on or before: Thursday, 21 October 2021

As the recipient of this notice, you are also required to provide a statutory declaration in the form attached, to accompany the environmental report submitted to the department.

The suitably qualified person who prepares the environmental report must also provide a statutory declaration in the form attached to the environmental report submitted to the department.

Copies of the template statutory declarations can also be accessed from the Queensland Government website at www.qld.gov.au, using the publication number as a search term:

1. Statutory declaration environmental evaluation for recipient ([ESR/2016/1997](#))

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2. Statutory declaration for suitably qualified person ([ESR/2016/2266](#))
3. Statutory declaration environmental evaluation for auditor ([ESR/2016/2265](#))

Take notice:

1. The requirements of the notice to conduct or commission an environmental investigation take effect immediately upon service of this notice;
2. This notice remains in force until further notice from the department; and
3. You are responsible for meeting the costs of conducting or commissioning the environmental evaluation, preparing the environmental report and providing any further information as requested by the department.

C. 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 certain decisions of the department, may be able to apply to have the department review that original decision.

Generally, a request to have a decision reviewed must:

- be made within 10 business days of the decision being notified to the person;
- be supported by enough information to enable the department to decide the application for review; and
- be made using the application form, Application for review of original decision ([ESR/2015/1573](#)) available on the Queensland Government website at www.qld.gov.au, using the publication number (ESR/2015/1573) as a search term.

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 also be able to request a statement of reasons for a decision or a statutory order review under the *Judicial Review Act 1991*. For further information about reviews and appeals see the information sheet, Internal review and appeals ([ESR/2015/1742](#)) available on the Queensland Government website at www.qld.gov.au, using the publication number (ESR/2015/1742) as a search term.

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

D. Penalty

Failure to comply with a notice to conduct or commission an environmental evaluation is an offence.

1. The maximum penalty for an individual is 300 penalty units, totalling \$ 40,035.00.
2. The maximum penalty for a corporation is 1500 penalty units, totalling 200,175.00.

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Should you have any queries in relation to this notice, please contact Daniel Gunzburg of the department on telephone number (07) 4222 5157.



Signature



Date

Gus Gonzo

Manager Minerals

Delegate of the Chief Executive

Department of Environment and Science

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Enquiries:

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