

Environmental Enforcement Order

Order ID STAT-E-100843561

Date of issue 22 May 2025

Issued to ABERDARE COLLIERIES PTY LTD (009 659 367)

Registered address Level 12, 31 Duncan Street, Fortitude Valley, QLD, 4006

Site address 1039 Banana-Bridge Road, Brigalow, QLD, 4412

Land reference Lot 34 on Plan DY604

Cc CS ENERGY LIMITED (078 848 745)

Administering Authority Chief Executive of the Department of the Environment, Tourism, Science & Innovation

Legal reference Pursuant to Section 362 of the *Environmental Protection Act 1994*

Service method ☒ Registered post ☐ Hand delivered ☒ Also by email ☐ Orally (s369(2))

Issued by Tariq Khan, Compliance Delivery Manager, Department of the Environment, Tourism, Science, & Innovation (the department) as the delegate of the administering authority (the delegate).


Delegate Signature

Contact If you have any questions about this notice, please contact:
Senior Environmental Officer, Ethan Waldron, Toowoomba Compliance Centre
Email: southwest.es@des.qld.gov.au Telephone: (07) 4529 8335

Why are we writing to you?

The department reasonably suspects that Aberdare Collieries Pty Ltd (009 659 367) (you) have contravened Section 430(3) of the *Environmental Protection Act 1994* with respect to your activities situated at 1039 Banana-Bridge Road, Brigalow, QLD, 4412 on land described as Lot 34 on Plan DY604.

What are you required to do?

Please read this Environmental Enforcement Order (EEO) carefully and carry out all the required actions listed below by the required dates. Terms used in this order have the meaning defined in the Grounds and Definitions section of the EEO, or if not defined, in the Act. This EEO takes effect from the service date and remains in force until stayed, amended, revoked, or finalised.

A. Requirements

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

1. Effective immediately, and for the duration of this notice, you must ensure that the pH level of water in the Initial Ash Disposal Area (IADA) storage dams is maintained within the range of 6 to 9 at all times.

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2. Effective immediately, and for the duration of this notice, you must enact water reduction measures to ensure water levels in the IADA storage dams are as low as reasonably practicable at all times.
3. By 3 November 2025, you must have engaged an appropriately qualified person(s) to develop a 'Reclamation Plan' that details the actions needed to ensure the IADA (including the water storage dams) becomes a non-polluting landform. The Reclamation Plan must address the following:
 - a. decommissioning and disposal of associated infrastructure; and
 - b. remediation of contaminated material prior to capping (if necessary); and
 - c. earthworks and landform development (reshaping and reprofiling); and
 - d. stormwater management, diversion, and drainage; and
 - e. design and construction of capping, which considers:
 - i. prevention of contamination to groundwater; and
 - ii. prevention of air quality degradation, e.g., through dust and/or gas; and
 - iii. prevention of contamination to land and surrounding environmental values; and
 - iv. surface preparation, e.g., topdressing, scarification, contour ripping/discing, soil amelioration; and
 - v. the future land use, i.e., light grazing; and
 - vi. other methods to isolate the waste (solid, semi-solid, liquid and/or gas) from the environment.
4. By 30 May 2026, you must have engaged and commissioned an appropriately qualified person(s) to carry out and complete the actions that are detailed in the Reclamation Plan (as specified by Requirement 3 of this notice).
5. By 30 November 2028, you must have completed the actions that are detailed in the Reclamation Plan and also obtained certification from an appropriately qualified person(s) that the IADA is a non-polluting landform in accordance with the Reclamation Plan.
6. By 30 November 2028, you must have completed an 'Aftercare Management Plan', developed by an appropriately qualified person, that addresses the following:
 - a. a monitoring program for residual environmental risk, which includes:
 - i. groundwater monitoring (with specified frequency and parameters); and
 - ii. surface water monitoring (with specified frequency and parameters) (if necessary); and
 - iii. cap integrity monitoring (with specified frequency and actions for any inspections); and
 - iv. any other relevant environmental monitoring.
 - b. a maintenance program for cap integrity, which includes:
 - i. restoration of any landform depressions caused by settlement/subsidence; and
 - ii. restoration of any cracks (breaks in the cap); and
 - iii. restoration, prevention, and control of erosion; and
 - iv. maintain any vegetation (if applicable); and
 - v. any other measures to mitigate water infiltration to waste.
7. You must provide written evidence to the department demonstrating compliance with Requirements 3, 4, 5, and 6 by the dates specified in each respective requirement. You must submit a copy of the complete Reclamation Plan and Aftercare Management Plan to demonstrate compliance with Requirement 3 and 6.
8. Any written notification or submission to the department, as required by this notice, must be provided via email to southwest.es@des.qld.gov.au or PO Box 9066, WILSONTON, QLD 4350.

B. Grounds and Definitions

1. In accordance with Section 359(e)(ii) of the *Environmental Protection Act 1994*, the Department of the Environment, Tourism, Science, and Innovation (the department) requires you to take reasonable measures to secure compliance with Condition C1 of your Environmental Authority (EA), BRID0033, which states:

'Contaminants must not be directly or indirectly released from the licensed place and as a result of the ash disposal activity to any waters or the bed and banks of any waters except as detailed in Schedule C'.

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

1. The department is the administering authority and has the responsibility for enforcing the *Environmental Protection Act 1994* (the Act).
2. You hold an Environmental Authority (EA) (BRID0033) (the EA) to carry out environmentally relevant activity (ERA) 60, waste disposal, on the following Lot and Plan(s): 1DY187, 7RP176345, 11SP174073, 2SP174068, 26DY374, 28DY275, and 34DY604 (the premises).
3. The department is satisfied that you are the responsible entity for the operation and maintenance of the premises.
4. You utilise the Initial Ash Disposal Area (IADA) to deposit fly and bottom ash (incidental), coal rejects, as well as other miscellaneous materials from the adjacent Kogan Creek Power Station (i.e., ERA 14 – Electricity Generation) at the premises.
5. The IADA has water storage dams (the dams) that collect stormwater runoff and **leachate** from the catchment area (i.e., IADA's footprint) as well as wastewater and liquid wastes derived from the Kogan Creek Power Station.
6. Under Section 11 of the Act, the dams' inputs (the inputs) are considered to constitute a contaminant as it is a liquid (that has the capacity to cause environmental harm). Especially, as the inputs can contain elevated levels of, but not limited to, the following parameters: pH, electrical conductivity, hydrocarbons, and heavy metals (e.g. arsenic).
7. On 13 September 2023, you provided the department with an Investigative Report (the report) prepared by an **appropriately qualified person(s)**.
8. The report determined that the dams were hydraulically connected (i.e., seeping) to the underlying groundwater (Springbok Sandstone Aquifer) due to an increase in standing water level (SWL) and shifting hydrochemistry (especially, in relation to soluble trace elements) at monitoring bore (MB) 9 and MB10-R.
9. On 30 October 2024, you provided the department with an additional report that states you did not implement a constructed liner (e.g., clay or HDPE), and relied on a naturally low permeability foundation for the IADA.
10. The department considers that you have not met the environmental performance indicators, detailed within your Ash Disposal Management Plan (ADMP), of not having groundwater quality impacted and achieving a barrier with a hydraulic connectivity of $<1 \times 10^{-8}$ m/s.
11. Under the EA, the definition of waters includes groundwater.
12. Under Schedule 4 of the Act, the dams are considered to have released, and continue to release, a contaminant into the environment as it has failed to prevent the contaminant from being deposited, discharged, emitted, or disturbed.
13. On 20 December 2024, you provided the department with speciation information of the arsenic in the groundwater. Speciation confirmed the arsenic to be arsenite (AsIII). Arsenite predominates under groundwater's reducing conditions and is the more toxic form.
14. On 6 March 2025, you notified the department that the arsenic concentrations, in MB43 and MB46, exceeded the EA's *Table 3: Groundwater contamination limits* on two (2) consecutive occasions, as follows:

Table 1: Groundwater monitoring results for arsenic at MB43 and MB46 at the Initial Ash Disposal Area. Provided 6 March 2025.

	EA Trigger Level	16 October 2024	14 November 2024	24 February 2025
MB43 Arsenic	0.013 (mg/L)	0.022 (mg/L)	0.022 (mg/L)	0.024 (mg/L)
MB46 Arsenic	0.013 (mg/L)	-	0.021 (mg/L)	0.029 (mg/L)

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15. The report identified that the elevated arsenic concentrations were caused by the introduction of highly alkaline process water from the Out-of-Pit Ash Cell (OPAC) (HDPE-lined) in between March 2017 to March 2018.
16. Arsenic becomes soluble, when exposed to highly alkaline substances, and is able to leach out of the disposed ash. The department considers that the elevated arsenic concentrations would not be present, or otherwise feasible, if not a direct or indirect result of your ash disposal activities.
17. The department considers the arsenic concentrations have resulted in a long-term change to the groundwater's hydrochemistry and are likely to cause environmental harm.
18. The IADA (and associated arsenic contamination) is situated near (50 to 250 meters), and migrating towards, multiple potential groundwater dependant ecosystems (GDE) that are intermittently connected to aquifers with a brackish salinity (moderate confidence) or saline with neutral pH (high confidence).
19. The arsenic concentrations are above, or equal to, the 95% species protection trigger levels, as per the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC Guidelines), i.e., 0.024 mg/L.
20. According to the *National Environmental Protection (Assessment of Site Contamination) Measure 1999* (the NEPM), arsenic concentrations have reached groundwater investigation levels for a moderately disturbed ecosystem, i.e., 0.024 mg/L.
21. Under the *Environmental Protection (Water and Wetland Biodiversity) Policy 2019*, 'Condamine River Basin', the arsenic concentrations are above the water quality objectives for the IADA's surrounding environment as a moderately disturbed ecosystem.
22. The *Commonwealth Livestock Drinking Water Quality Guidelines (draft)* states that the arsenic concentrations are at, or approaching, levels that are detrimental to livestock health (0.025 mg/L). Livestock grazing is the most likely post closure land use.
23. Schedule C1 'Water' of the EA, does not authorise the dams' input to be released to water under any circumstance. Schedule C does not provide any exception that would otherwise authorise a release of contaminants to waters.
24. Under Section 430(3) of the Act, it is an offence for a person to contravene a condition of an environmental authority. The department alleges that you have contravened Condition C1 of the EA as the IADA's dams are releasing contaminants to waters without authorisation.
25. The department considers it is reasonable to require you to secure compliance with Condition C1 of the EA.
26. The department has considered the facts and circumstances (including the standard criteria and human rights) and determined that the required actions are reasonable to prevent and/or mitigate any further potential, or actual, environmental harm.

Definitions that apply to this notice:

Leachate means a liquid that has, or likely to have, made contact with and/or derived from waste matter (solids, semi-solid, liquid and/or gas) at the licensed place that contains soluble, suspended, and/or miscible contaminants.

Appropriately qualified person means a person who has professional qualifications, training, skills, or 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.

Warnings and information about this EEO

A person who is bound by this EEO and who fails to comply with this EEO, without a reasonable excuse, commits an offence under the Act.

The maximum penalty for:

- wilfully contravening a requirement of an EEO is 6,250 penalty units, totalling \$1,008,125.00 for an individual, or \$5,040,625.00 for a corporation.
- contravening a requirement of an EEO is 4,500 penalty units, totalling \$725,850.00 for an individual, or \$3,629,250.00 for a corporation.

Note, that under Section 493 of the Act, each Executive Officer of the corporation may be taken to have also committed an offence, of failing to ensure the corporation complies with the Act.

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If you propose to dispose of the premises or business to which the EEO relates, you must advise the buyer of the existence of this EEO. Failure to provide written notice to the buyer of the existence of the order is an offence under Section 369C of the Act with a maximum penalty of 50 penalty units, totalling \$8,065.00 an individual, or \$40,325.00 for a corporation.

Note, you must also give the administering authority notice within 10 business days of ceasing activities to which this EEO relates. Failure to provide notice of ceasing to carry out activities is an offence under Section 369D of the Act with a maximum penalty of 50 penalty units, totalling \$8,065.00 an individual, or \$40,325.00 for a corporation.

Further information about EEOs can be found on the [department's website](#) (ESR/2024/6802).

Review and appeal rights

Under Chapter 11, Part 3 of the Act, a dissatisfied person may apply for a review of this EEO within ten (10) business days of receiving this EEO. A dissatisfied person who is dissatisfied with the review decision may appeal against the decision to the Court.

A request for review is to be made using the approved form 'Application for review of original decision' (available on the [department's website](#)). Applications for reviews are to be sent to Permit and Licence Management, Department of the Environment, Tourism, Science and Innovation, via email at palm@des.qld.gov.au, or by mail to the following address: GPO. Box 2454, Brisbane, QLD, 4001.

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.

Privacy statement

Section 540 of the Act requires the department 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 to take extracts or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety unless redaction in part is required by the Act. 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.

Accessibility

Contact us if you need this information in an accessible format such as large print or audio.

Interpreter assistance



If you need interpreter assistance or want this document translated, please contact us and advise your preferred language. If you are deaf, or have a hearing or speech impairment, contact us through the National Relay Service.