



Your reference :  
Our reference : SF19/72243; DOC19/671607  
Contact : Mr Matthew Prince; (02) 6332 5354

Mr Paul Freeman  
NSW Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

07 August 2019

**Centennial Coal Company Limited Modification 5 – Clarence Colliery Workforce Increase**

I refer to the email received on 23 July 2019 from the Department of Planning and Environment (the Department) requesting the Environment Protection Authority (EPA) provide comment on the Environmental Assessment (EA) prepared for the modification application submitted by Centennial Coal for the Clarence Colliery MOD 5 – workforce Increase (the proposal).

As requested, the EPA has considered the EA for the Proposal in terms of the potential impact to air quality, noise emissions, surface water and waste management.

The EPA understands that the modification proposes to modify its development consent DA 504-00 pursuant to Section 4.55(2) of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) to increase the number of approved full-time equivalent (FTE) personnel on-site. Noting that the proposed workforce increase would require the expansion of the effluent irrigation area onsite, the EPA has prepared a response pertaining to this in Attachment A.

Overall, the effluent irrigation scheme should be able to be operated sustainably, however, additional water quality protection considerations for the Wollangambe River high conservation area are considered appropriate.

Should you have any further enquiries in relation to this matter please contact Mr Matthew Prince at the Central West (Bathurst) Office of the EPA by telephoning (02) 6883 5354.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Sandra Jones'.

**DR SANDIE JONES**  
**Manager Regional Operations**  
**Environment Protection Authority**

## **CENTENNIAL COAL COMPANY LTD – CLARENCE COLLIERY MODIFICATION – EPA COMMENT**

### **Background**

The EPA notes that effluent application has historically occurred at Clarence Colliery, however, the licence does not currently contain any conditions relating to effluent management. Effluent production is to increase from 42kL/day to about 50kL/day. Modelling suggests 7ha will be required to dispose of treated effluent of 400 staff by application to land. This is an increase upon the 0.4ha currently used for 300 staff.

The new application area(s) will be a combination of three existing Reject Emplacement Areas (REAs), in addition to the current disposal area. The effluent irrigation area is located within the Wollangambe River catchment which is World Heritage listed.

### **Effluent Irrigation Assessment**

#### **Wet weather storage**

Water balance modelling for the effluent irrigation system determined an irrigation area of 7 ha is required to achieve the following objectives:

- the 50th percentile wet weather storage requirements (as defined by DEC 2004 for low strength effluent); and
- objective of restricting overflows from the wet weather storage to an average of once per year.

The assessment states that an irrigation area of 7 ha is required to satisfy both objectives. The NSW Effluent Irrigation Guidelines (DEC 2004) state that “as a general guide, for low strength effluents, uncontrolled releases may be permitted in 50 percent of years”. It is unclear why the objective of restricting overflows to an average of once per year is being referred to as it is inconsistent with DEC (2004).

It is therefore recommended that a condition of consent requires that wet weather overflows are restricted to once every two years on average (as a minimum requirement) and that managed overflows will not occur once every year. This is subject to a discharge impact assessment that further considers potential risks to the Wollangambe River catchment.

#### **Discharge impact assessment**

The location of the overflow point is not clearly assessed e.g. whether the overflow from the wet weather storage discharge is to the Wollangambe River catchment. If the discharge is to the high conservation value Wollangambe River catchment then additional impact assessment and mitigation would be appropriate e.g. a greater requirement than a standard 1 in 2 year on average overflow frequency from the wet weather storages.

The basis for the assessment should be no change in water quality in the waters of the protected area and then all practical measures to achieve that aim should be considered and implemented. If the overflow is to the Wollangambe River catchment, options to account for the more sensitive receiving waters could include, for example:

- increased storage or irrigation area to enable less frequent managed overflows than provided for in DEC (2004)
- additional water quality improvement measures below the main wet weather storage, such as wetlands, bioswales or other detention/infiltration basins
- redirecting overflows to the main coal mine water system.

It is recommended that as a condition of approval that a discharge impact assessment is conducted to consider and implement all practical measures to achieve greater protection of the Wollangambe River catchment based on an aim of no change in water quality in the waters of the protected area.

#### **Runoff from Reject Emplacement Areas (REAs)**

Leachate and surface runoff from the REAs drain to leachate dams. Wastewater from dams 1 and 3 is treated offsite. Dam 2 discharges to water (licenced discharge point with monitoring and pollutant limits).

It is recommended that, as a condition of approval, that a representative monitoring program is developed and implemented to consider any potential increased risk of discharges from Dam 2 due to irrigating of effluent in REA catchments. Based on results of the representative monitoring program, where necessary, all practical measures should be considered and implemented to address any water pollution risk and to determine any ongoing monitoring requirements or other licence conditions. If Dam 2 discharges to the Wollangambe River catchment, measures to provide greater protection of the Wollangambe River catchment should be developed and implemented.

#### **Sustainable reuse**

Effluent reuse systems are generally designed to use the water and nutrients in effluent rather than load an area without water and nutrient uptake.

*It is recommended that irrigation occurs on vegetation in the REAs to stabilise soil and surfaces so that water and nutrients are sustainably used.*

#### **Current disposal area**

The current disposal area appears to be relatively small (0.4 ha) compared to the area that may have been needed for sustainable effluent irrigation under the existing operation.

*It is recommended that appropriate ongoing monitoring at this 0.4 ha site is conducted to manage the long-term sustainability for continued irrigation and to determine any mitigation options for any over-loading from previous irrigation.*

#### **Recommended Consent Condition**

If the DA is to be approved, then the EPA recommends the following consent condition:

- No effluent is to be disposed of in the Wollangambe River Catchment.

