Tecpro
AUSTRALIA
Technical Solutions You Can Rely On

Dust Suppression in Underground Coal Mines

Customer:
Centennial Coal Mine
Mandalong, NSW

Website:
centennialcoal.com.au

Industry:
Mining & Minerals

Employee Count:
501 - 1000

Tecpro Solutions:
* Custom Crusher Dust
Suppression System
* Custom ROM Bin Dust
Suppression System

Key Facts

- Dust was causing health hazard for miners.
- Tecpro provided a custom designed crusher dust suppression system, and a ROM bin dust suppression system.
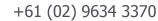- Excess of 90% reduction in respirable dust emissions.

About Centennial Coal Mine

Centennial Coal Company Limited (Centennial) is an Australian mining company supplying domestic and export markets. Our coal fuels around 30% of NSW's coal-fired electricity generating capacity, while we also manage a successful export business. With the support of Banpu, Pan-Asia's leading independent energy producer, we deliver a superior service to our customers.

Centennial Coal's Mandalong mine produces 5.5 million tonnes of coal each year from its underground Newcastle coal fields.

Coal production typically produces a lot of dust creating a health hazard for mine operators.

Dust Suppression in Underground Coal Mines

The Challenge

At the point where the coal drops from the crusher into the underground bin, a substantial amount of dust was being generated causing Centennial Coal problems. Centennial Coal had tried a number of different approaches to remedy the dust problems however none were as effective as they had hoped.

The Solution

After consulting with Wollongong University, who produced CFD modelling of the airflow around the bin and crusher, Tecpro was contracted to design a custom crusher dust suppression system and ROM bin dust suppression system.

The Results

Following installation of the dust suppression systems, Coal Services Health measured the impact of the systems. At the time of testing only half of the spray nozzles were in operation. Nevertheless respirable dust emissions had been reduced by 68% and with all spray operating, expectations for excess of 90% reduction.