



PROJECT SNAPSHOT



CURRENT PROJECT

CENTENNIAL COAL: METHANE REDUCTION DEMONSTRATION

Given the safety hazards associated with deploying commercially-available Ventilation Air Methane (VAM) abatement technology at an operating underground coal mine, the COAL21 Fund has prioritised investments in projects seeking to demonstrate that VAM abatement technology can be deployed safely without unacceptably increasing risks to a mine's operation.

PURPOSE

This project, led by Centennial Coal, aims to demonstrate the safe connection of a VAM abatement unit to a ventilation fan at an operating mine, capturing 100 per cent of the ventilation air flow and achieving 98 per cent abatement of methane.

It will draw heavily on the general principles developed by the University of Newcastle Methane Reduction Project and apply them to the selected host mine, providing a full-scale demonstration under one set of mine conditions.

ACHIEVEMENTS AND FINDINGS

The project has developed a Design Assurance Framework specifying the verification, validation and certification activities for a VAM abatement connection.

This framework sets out processes to ensure the VAM abatement unit and the connecting duct incorporate all necessary safety features and explains how to verify their effectiveness. The team has also completed a conceptual design for the connecting duct, incorporating a range of safety features.



TIMING

From the work completed by both this project and the related project at the University of Newcastle, it has become clear that proceeding to a full-scale demonstration at an operating underground mine is too big a step to take without further intermediary studies at smaller scale.

For this reason, the project has been on hold since November 2015 while several options for such studies are examined. Agreement on next steps is expected in the near future.

PROCESS

The objective of this project is to deliver a full-scale demonstration of VAM abatement at an operating underground coal mine. Further work required to prepare for this is being scoped in response to the findings of the related University of Newcastle project.

Next steps in the project may include:

- assessment of the impact on the mine ventilation system
- critical risk analysis
- detailed engineering design studies for a range of generic mine configurations
- further experimental studies using:
 - the detonation tube and/or large duct developed by this project
 - one or more pilot-scale VAM abatement units, currently at Mandalong and Bloomfield mines.



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MORE INFORMATION

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