Coal Mine Safety Project (Mei Kuang An Quan)

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Contents

• Sindicatum Climate Change Foundation

• The Coal Mine Safety Project

• Pike River Coal Mine Case Study
  - Royal Commission Report
  - The incident and its management
  - Cause and contributory factors
  - Impacts
  - Lessons learned
Sindicatum Climate Change Foundation

- Not-for-profit

- Launched by SSR in 2009 to add a social dimension to its commercial projects

- Supports and encourages education and research relating to sustainable energy

- Promotes best practice and use of appropriate technologies

http://www.sindicatumccf.org
Coal Mine Safety Project

- Improve safety in gassy mines from application of best practice gas drainage, utilisation and greenhouse gas mitigation

- Inform Chinese regulators and decision makers on mine safety lessons through case studies

- Develop a case study based on the Pike River disaster to ensure the mistakes are not repeated

- Input to the UNECE “best practice” initiative and liaison with global institutions and Universities to disseminate.
Pike River Coal Mine case study

On 19 November 2010, 29 miners were killed in an explosion at the Pike River coal mine, 46km NNE of Greymouth, west coast, New Zealand, South Island.
Pike River Coal Mine case study

Three further explosions and a fire occurred before the mine atmosphere was made inert and the mine sealed
Pike River Coal Mine case study

Financially supported by SCCF, a team of three Mining Engineers went to NZ in November 2012 to:

- Construct a case study as an international mine safety educational tool aimed at governments, regulators and mining companies
- Work with the Families Committee to investigate the possibility of re-entering the sealed working area of the mine to recover the family members for proper burial.
A quick tour - Greymouth
Mine buildings merge into forest
Surface access to the worked area of the mine
Outcrop of coal-bearing formation
Aerial view of the mine portal
Memorial to the mine disaster victims
Royal Commission Report on the Pike River disaster

An independent investigation by an august body to determine:

• Cause of the explosions and loss of life
• Effectiveness of search, rescue and recovery
• Adequacy of the law and its implementation
Royal Commission Report on the Pike River disaster

Published 5 November 2012, 16 principal recommendations including:

- Significant changes to H&S legislation, administration and enforcement
- Improve corporate governance practices to better manage risks and monitor H&S compliance
- Mine managers should consult best practice guidance
- Importance of worker participation in H&S
The incident and its management

• Slow initial response by mine management in confirming and reporting the explosion

• Emergency procedures neither substantive nor rehearsed

• Police responsible for incident control but unprepared and unqualified to manage

• In the absence of expert leadership and coordination no attempt could be safely made to enter the mine

• Families of victims ill-informed and frustrated by lack of action on recovering the bodies
 Cause

• Various possible gas accumulation and emission scenarios with high likelihood of occurrence

• Various ignition sources present - unprotected electrical equipment
Contributory factors

• Geological problems, delays, financial stress, premature production

• Inadequate ventilation and gas drainage

• Lack of experienced staff underground

• No management action despite repeated high gas concentration warnings

• Ineffective corporate oversight of H&S

• Ineffective mine safety legislation and enforcement
Impacts

- Families and the community devastated by the loss
- Good support by the community for the Families but lack of action by the authorities and the new mine owner on recovery operations
- The Royal Commission Report galvanised the NZ government into reviewing its H&S legislation, administration and resources
- The tragedy, poor coal market and apparent loss of national confidence has led to questions about the future of underground coal mining in NZ
Some mine safety lessons learned

• Robust mine H&S legislation, strong enforcement and workforce safety participation is essential to counter pressures of production and finance

• Failure to adopt best practice guidance can have tragic consequences

• Oversight of H&S management and compliance is a fundamental element of corporate governance

• Mine design and access should not be compromised in order to meeting stringent environmental protection criteria
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