Best Practices for CMM Drainage and Utilization
Session Overview

• Focus of This Session
• Background on Developing the Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines
• Introduction of Session Speakers
FOCUS OF THIS SESSION
The Problem

Methane released during coal mining is the cause of a significant number of accidents and is a powerful GHG.

- Risk factors and barriers to widespread effective methane drainage and use has been identified by Ad Hoc Group of Experts:
  - Difficult geological conditions
  - Underinvestment in methane drainage and utilisation
  - Poor operational practices
  - Ineffective or counter-productive regulatory standards
  - Inadequate enforcement of safety regulations
US Bureau of Mines created in 1910 in response to Monongah coal mine disaster of 1907

Collective Bargaining allowed by National Industrial Recovery Act of 1933

*Note: Data presented here only reflects incidents with 5 or more fatalities.
Source data: NIOSH Mining Safety and Health Research
Number of Occupational Fatalities and Fatality Rates in the Mining Industry by Commodity, 1931-2007

(Excludes office employees; Data source: MSHA)

NOTE: Noncoal includes metal, nonmetal, stone, and sand and gravel operations.

Revised: 09/09/2009
Mining Accidents at Gassy Coal Mines in USA: Regulations, Rules and Best Practices

- Sago – (2006, explosion, 12 deaths) MSHA promulgating new regulations regarding sealed areas to prevent another incident
- Loveridge Mine No. 22, West Virginia-( 1999 fire and explosion, no deaths)– NIOSH drafted white paper on best practices for welding/cutting in underground mines as a result of Loveridge and a couple other incidents
- West Elk Mine, Colorado – ( January 2000, spontaneous heating caused fire, not deaths) the MSHA-mandated CO detection rules in effect at the time of the incident resulted in safe evacuation of all miners during the event
BACKGROUND ON DEVELOPING THE BEST PRACTICE GUIDANCE FOR EFFECTIVE METHANE DRAINAGE AND USE IN COAL MINES
Best Guidance Project Objectives

- Coal industry lacks a global set of recommended principles and standards for methane recovery and utilisation
- Develop a guidance that is principle based that can be adapted to varying mining conditions
- Provide to the appropriate audience: managers, mine operators, regulators, government officials and technical professionals
Development of the Best Practice Guidance

Lead Organisations:

• Methane to Markets Partnership
  International partnership aiming to further CH$_4$ recovery

• UN Economic Commission for Europe
  Ad Hoc Group of Experts on Coal Mine Methane

• US Environmental Protection Agency
  Expertise in domestic and international efforts on CMM recovery and utilisation, co-chair of Coal Subcommittee
Deliverables

• Publication of “Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines”
  – Primarily a technical document, but accessible to managers and practitioners alike

• Detailed objectives and principles, NOT prescriptive

• Available in multiple languages

• Follow-up plans are underway at UNECE
  – Supportive workshop / seminar series: Add value and disseminate findings directly to mining professionals
  – Website will act as the home for a living document

Methane to Markets
Participants(i)

Executive Steering Committee

- Pamela Franklin, Co-chair, M2M Coal Subcommittee
- Roland Mader, Vice Chairman, UNECE Ad Hoc Group of Experts on Coal Mine Methane
- Raymond C. Pilcher, Chairman, UNECE Ad Hoc Group of Experts on Coal Mine Methane
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- Yuriy Bobrov, Association of Donbass Mining Towns (Ukraine)
- Graeme Hancock, World Bank
- Martin Hahn, International Labour Organization
- Hu Yuhong, State Administration for Worker Safety (China)
- Sergei Shumkov, Ministry of Energy (Russian Federation)
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- Guy Pierce Jones, Trolex Ltd. (UK)
- B.N. Prasad, Central Mine Planning & Design Institute (India)
- Ralph Schlueter, DMT GmbH & Co. KG (Germany)
- Karl Schultz, Green Gas International (UK)
- Jacek Skiba, Central Mining Institute of Katowice (Poland)
- Trevor Stay, Anglo American Metallurgical Coal (Australia)
- Oleg Tailakov, International Coal and Methane Research Center, Uglemetan (Russian Federation)
Document Contents

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Chapter 2. Fundamentals of Gas Control
Chapter 4. Mine Ventilation
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Chapter 8. Conclusions and Summary for Policymakers
Chapter 9. Case Studies: UK, South Africa, China, Australia, Germany

Methane to Markets
SESSION SPEAKERS
Session Speakers


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Thank you