

# Review of Mine Safety Regulations

UNECE – Ad Hoc Group of Experts on CMM

**Victoria Burn**

Associate

Norton Rose LLP

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## Introduction to Norton Rose LLP

- Leading international law firm
- Over 2000 lawyers
- 24 offices worldwide – offering a full business law service across Europe, Asia and the Middle East
- Strong in energy & infrastructure, transport, technology, corporate finance and financial services
- Market-leading emerging market experience

## Introduction to Norton Rose LLP

- Leading carbon, clean tech and renewables team
  - *Best Law Firm 2007: Kyoto Project Credits (JI and CDM) – Environmental Finance Magazine*
  - *Renewable energy deal of the year, 2008 (Havsnas, Sweden) - Euromoney*
- Strong mining practice
  - *Mining & Minerals 2007: Tier 1 law firm – Legal 500 and Chambers Global*

## Introduction to Norton Rose LLP

- CMM/CBM project development
  - 15 CMM CDM projects, PRC
  - CBM projects, Rwanda and Botswana
  - CMM utilisation project, UK
- Wider policy development / government advisory roles in the mining sector
  - Kosovo: drafting energy and mining law
  - Middle East: advising on the development of legal framework for mining and mine ownership in various jurisdictions

## Key regulations (PRC)

- Regulation on Coal Mine Safety (November 2004, revised October 2006)
- Basic Index of Coal Mine Gas Drainage and Exploitation (November 2006)
- Code for Coal Mine Gas Drainage (November 2006)
- Special Provisions of the State Council on the Prevention of Work Safety Accidents of Coal Mines (September 2005)
- CBM/CMM Discharge Standard (Trial) (April 2008)

## Key regulations (Russian Federation)

- Federal Law on Natural Resources N 2395-1 (February 1992)
- Federal Law on State Regulation of Coal Mining and Utilization N 81-ΦЗ (June 1996)
- Federal Law on Industrial Safety of Dangerous Production Facilities N 116-ΦЗ (July 1997)
- Coal Mine Safety Rules ПБ 05-618-03 (June 2003)
- Methodological recommendations regarding procedure for gas drainage in coal mines РД-15-09-2006 (August 2006)
- Methodological recommendations regarding procedure for conducting aero-gas monitoring in coal mines РД-15-06-2006 (July 2006)

## Key regulations (Ukraine)

- Natural Resources Code N 132/94-BP (July 1994)
- Law on Alternative Types of Liquid and Gas Fuel N 1391-XIV (January 2000)
- Regulation on Approving the List of Natural Resources of National and Local Importance N 827 (December 1994)
- Mine Safety Rules N 257 (November 2004)
- Programme for Increasing Mine Safety Activities N 374 (March 2006)
- Plan of Priority Measures for Increasing the Level of Safety and Labour Protection at Coal Mines N 858-p (June 2008)
- Bill on Gas (Methane) from Coal Deposits (December 2007)

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## General characteristics of CMM safety regulations

- CMM and mine safety laws covered under numerous legislative and regulatory instruments
- Enforcement status unclear
- Generally widely drafted
- Technically overly prescriptive
- Standardised approach
- Law enacted by central government; enforced by local government
- Fragmented institutional framework

## Drainage (1)

- **Compulsory pre-drainage of worked out coal seam**
  - **China:** Guiding Opinion of State Administration of Coalmine Safety on Strengthening the Work of CMM Drainage Before Mining in Coal Mines (September 2007)
  - **Russia:**
    - Coal Mine Safety Rules ПБ 05-618-03 (June 2003)
    - Methodological recommendations regarding procedure for gas drainage in coal mines РД-15-09-2006 (August 2006)
  - **Ukraine:** Instruction on Coal Mine Degasification N 725 (November 2004) (COY 10.1.00174088.001-2004)

## Drainage (2)

- **Objective:** to improve safety by reducing methane emissions into the workings of an active mine
- **Consequence:** certain mines have wasted effort to attain targets in low-permeability coal beds
- **Proposal:** increase flexibility to allow waiver of obligations in low-permeability settings in favour of enhanced vigilance and post-mining gas-mitigation strategies

## Ventilation (1)

- **Limit air velocity in specific airway types**
  - **Russia:**
    - Coal Mine Safety Rules ПБ 05-618-03 (June 2003)
    - Methodological recommendations regarding procedure for gas drainage in coal mines РД-15-09-2006 (August 2006)
  - **Objective:** to mitigate effects of airborne dust and prevent spontaneous combustion
  - **Consequence:** limits ability of operators to dilute CMM emissions with ventilation air
  - **Proposal:** remove references to prescriptive numerical limits in favour of safe working environment (case-by-case approach)

## Ventilation (2)

- **Requirement to ventilate unused roadways**
  - **Russia:**
    - Coal Mine Safety Rules ПБ 05-618-03 (June 2003)
    - Methodological recommendations regarding procedure for gas drainage in coal mines РД-15-09-2006 (August 2006)
  - **Objective:** to avoid undetected build-up of gas (instead of monitoring)
  - **Consequence:** effects safety by reducing airflow available at key work points (eg longwall)
  - **Proposal:** remove numerical standards in favour of increasing gas detection requirements

## Concentration (1)

- **Obligatory concentration limits for utilisation limits tech transfer under the CDM**
  - **China:**
    - CBM/CMM Discharge Standard (Trial) (April 2008)
    - Regulation on Coal Mine Safety (October 2004, revised October 2005)

## Concentration (2)

- **Objective:** (1) compulsory utilisation > 30% CMM concentration to improve safety (environmental benefits)  
(2) to prevent utilisation <30% CMM concentration to improve safety (not explicitly prohibited and hence practiced)
- **Consequence:** obligatory utilisation above explosive range creates a barrier to CDM CMM (tech transfer improves safety standards and provides utilisation incentive) and encourages utilisation of explosive gas
- **Proposal:** enforce limits, prohibit explosive gas mixtures in mines and introduce automatic shut-down mechanisms (UK)

## Ownership of CMM (1)

- Separate ownership prevents mine operator and developers utilising CMM resource
  - **China:**
    - Measures on the Registration of Exploitation of Mineral Resources (February 1998)
    - Ministry of Land and Resources: Notice on Strengthening the Comprehensive Exploitation and Utilisation of Coal and CBM/CMM (April 2007)

## Ownership of CMM (2)

- **Objective:** government ownership of CMM promotes integral development of CMM resource (mine owner's interest limited to preferential rights)
- **Consequence:** no ownership rights and conflict over development order leaves CMM resource wasted
- **Proposal:** incentivise mine owner/operator to maximise utilisation (and avoid wastage) by permitting joint ownership through single approval process

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## Conclusions

- **Regulation on CMM and coal mine safety is:**
  - fragmented
  - prescriptive
  - ineffective
  - poorly enforced
- **Co-operation between project developers and lawyers to build structured argument for change**
- **Lobby policy-makers to:**
  - consolidate regulations with expert input
  - improve safety
  - encourage CMM utilisation for environmental and commercial benefit

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