

Minjng Environmental MANAGEMENT

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**The sands of time:
a look back and
forward at the key
mining issues**



Canadian conference focuses on carbon storage

BY BARBARA HENDRICKSON

A RECENT conference held in Calgary, entitled 'Carbon Management and Trading', was designed to help Canadians develop an effective carbon-reduction programme and also access the carbon-emissions market for investment and compliance purposes.

The session, which was organised by the Canadian Institute and co-chaired by Barbara Hendrickson of McMillan Binch Mendelsohn and Nathan Maycher of TransAlta, outlined the latest emission-reduction technologies being used or considered in Canada to reduce greenhouse gases (GHG).

The conference included several presentations on the commercial viability of carbon-capture and storage (CCS) technologies. This is particularly valuable for Alberta, which has the highest GHG emissions in Canada.

Conference participants heard



Calgary

Photo: Mike Ridewood/Bloomberg News

how the feasibility of CCS will be driven by both federal and provincial government regulations. They were also told about a number of technological developments and pilot projects in the CCS area.

The conference heard from Jim

McCormack at TransCanada Pipelines, who discussed a number of emissions-management strategies, including a joint venture with the University of Calgary where methane gas is being oxidised biologically with the use of methanotrophic bacteria. The vented CH₄ is being reduced to CO₂ with a near 80%-oxidation rate being achieved.

Roxanne Pettipas of Conoco-Phillips spoke about the company's fugitive-emission pilot study. The study was aimed at stopping leaks of hydrocarbon products, such as methane, propane and volatile organic compounds.

Ken Brown of the Alberta Research Council spoke on the commercial viability of CCS and pointed out that Canada has a huge potential for carbon storage.

Nigel Banks of Calgary University and Mitchell Shier of Heenan Blaikie discussed legal and regulatory issues associated with CCS.

Both Professor Banks and Mr Shier called for further regulatory

clarification in Alberta, and other Canadian provinces, in the area of CCS in terms of property rights and treatment under the Alberta and federal offset regimes.

Conference participants heard from Dr Surindar Singh of Alberta Energy Research Institute, who outlined a number of studies in the oil-sands CO₂ emission area and the role that CCS can play in reducing those emissions.

Bradley Gilmour of Bennett Jones LLP reviewed the Alberta legal and regulatory process governing GHG reductions in oilsands.

Mr Gilmour pointed out that the terms of reference for the approval of any major energy project include a discussion of carbon emissions and measures to reduce them.

He outlined the recent decision by the Energy and Utilities Board that future projects at oilsands facilities must use alternative fuels and will be required to use gasification technology and be CCS-ready.

Safety report slams Grupo Mexico

A NEW study by an independent group of health and safety professionals has found "serious health and safety hazards" at Grupo Mexico's Cananea mine, which "require immediate and long-term corrections".

The report was produced by the California-based Maquiladora Health and Safety Support Network on behalf of the Mexican National Union of Mining and Metals Workers. Workplace conditions in the mine and processing plants were "being run into the ground", it stated.

Maquiladora found workers were exposed to high levels of toxic dust and acid mist, increasing their risk of contracting fatal

evidence from Cananea employees of more than 50 accidents over the past 12 months, including reports of amputations, electrocutions and at least one fatality.

The report accuses Grupo Mexico of failing to conduct a comprehensive medical surveillance programme, provide training, as required by Mexican law, or to install necessary ventilation and pollution controls.

The United Steelworkers union, which represents Grupo Mexico employees in the US, said the report should serve as a "wake-up call" for the company.

A spokesperson for Grupo Mexico said it had not seen the full report, but denied the company neglected the health of its workers.

In April, directors of a Grupo Mexico subsidiary paid US\$11 million in compensation to the families of 65 miners who were killed in a gas explosion in the Pasta de

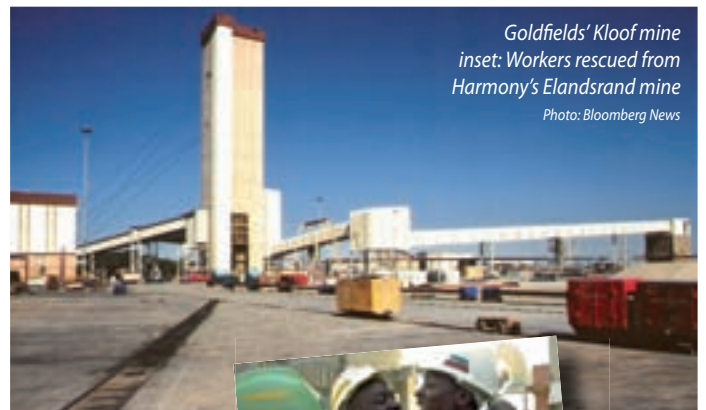
Conchos coal mine (also in Mexico) in February 2006.

Cananea gets wakeup call



respiratory diseases, including silicosis. It also reported anecdotal

NUM strike on St Barbara's Day



Goldfields' Kloof mine
inset: Workers rescued from
Harmony's Elandsrand mine

Photo: Bloomberg News

SOUTH Africa's National Union of Mineworkers (NUM) held a one-day 'national protest' in December against low safety standards.

The Commission for Conciliation, Mediation and Arbitration approved the strike on Tuesday, December 4 (traditionally celebrated as the Feast Day of the patron saint of miners, St Barbara).

Although there was no legal precedent for the strike (which are normally over specific, rather than general, grievances), the Chamber of Mines reached agreement with the NUM for the protest, which highlighted the union's concerns over accidents in South African mines.

All parties committed, at a senior level, to "develop pledges and actions" early in 2008 to improve

health and safety at the mines. The protest, involving

more than 240,000

workers, took place on a no-work, no-pay basis.

Despite falling production, in 2007 fatalities in South Africa's mines exceeded the previous year's 199, breaking an 11-year period of improvement.

In October, President Mbeki ordered a safety audit of all mines, and since many have since been closed, pending inspection, after fatalities.

Meanwhile, SA's Department of Minerals and Energy has pledged that mine managers will be prosecuted over accidents "should they be found guilty of negligence".