## US-India 6<sup>th</sup> Coal Working Group Meeting Record of Meeting Washington, DC, September 22-24, 2009

The U.S.-India Coal Working Group (CWG) held a three-day meeting September 22–24, 2009, in Washington, DC.

On September 22nd, representatives of the Indian delegation met with U.S. industry representatives to discuss opportunities for greater collaboration in the area of coal. On September 23rd, members of the CWG met to discuss ongoing CWG activities, identify and discuss additional opportunities for the CWG, discuss the sustainable utilization of coal, and witness a signing ceremony for the Simulator project awarded to Sharpe International. Representatives from the United States included government officials from the Department of Energy, the National Energy Technology Laboratory, Department of Interior, the Department of State, the Department of Commerce, the Trade and Development Agency, and the Environmental Protection Agency, as well as academic and industry representatives. The Indian delegation included representatives from the Ministry of Coal, Coal India Limited, Central Mine Planning and Design Institute, Northern Coalfield Limited, the Central Mining and Fuel Research Institute, and the Embassy of India, Washington, D.C.

Both Dr. James Markowski, Assistant Secretary for Fossil Energy, U.S. Department of Energy, and Dr. S.P. Seth, Special Secretary, Ministry of Coal, Government of India, in their opening remarks highlighted the importance of coal in each country, recognized the benefits of continued U.S.-India cooperation in the development of efficient and environmentally sound clean fossil energy technologies, and emphasized the need for creating a proper environment for domestic and foreign investment in the coal sector.

The status of CWG activities was presented by the lead coordinators of the protocol.

Presentations were made on the highlights of the U.S.-India Energy Dialogue; the Asia Pacific Partnership on Clean Development and Climate's Coal Mining Task Force, the Coalbed Methane Clearinghouse; upcoming activities for the U.S. Trade & Development Agency Program, and U.S. Department of Commerce collaborative activities. A representative of Coal India Limited gave an overview of India's coal industry. He emphasized the need for collaboration on advanced technologies for exploration of coal resources, coal beneficiation – dry method technologies, early warning technologies to detect underground strata movement, and improved ventilation and handling of methane.

The participants involved in the on-going CWG activities of fine coal beneficiation and recovery, waste coal utilization, coal beneficiation – dry method, and underground gasification presented status updates. These presentations led to detailed discussions on these specific projects. The project participants agreed to finalize collaborative proposals, seek to obtain approvals for future work, and start working on projects in the coming months.

The Indian delegation identified the needs of the Neyveli Lignite Corporation on dealing with acquifers and possibility of undertaking underground gasification projects. Both the sides agreed on the business and development opportunities available with this lignite producing firm. Ms. Barbara McKee, Lead U.S. Coordinator for the Coal Working Group, and Mr. P.R. Mandal, Lead Indian Coordinator for the Coal Working Group, led a discussion identifying new opportunities for the CWG. The discussions generated interest in joint collaboration in several new activities which would help improve environmental quality, increase efficiency, and could result in the reduction of significant levels of CO<sub>2</sub> emissions. Those new activities are:

- Reduce India's need to import coking coal by improving fine coal beneficiation and recovery techniques.
- o Enhance collaboration between U.S. and Indian laboratories in the area of clean coal technologies.
- o Accelerate the coal beneficiation program.
- o Identify ways to increase the usable quantum of energy from Indian coal.
- o Study the feasibility of underground coal gasification in India.
- o Update the Coal Working Group (CWG) strategy to accelerate collaboration.
- o Identify options to best utilize waste coal to mitigate environmental problems.

Ms. McKee emphasized the environmental benefits of greater deployment of coal beneficiating technologies, such as coal washing, and how this could lead to the realization of millions of tons of CO<sub>2</sub> avoided.

An agreement was signed between Sharpe International (USA) and CMPDI (India) to develop a coal beneficiation plant simulator. The work is to start immediately.

Closing remarks were made by Dr. Seth and Ms. McKee who indicated that they look forward to the ongoing work and future activities.

On September 24, the U.S. hosts escorted members of the Indian delegation on a site visit to Southwestern Pennsylvania to visit a coal preparation plant and a power plant.