

No. J-11015/301/2008-IA.II(M)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan,  
CGO Complex,  
New Delhi-110510.

To

Dated: 19<sup>th</sup> September 2008

**Shri A.K. Sen,**  
**M/s West Bengal Mineral Development Corp. Ltd.,**  
2<sup>nd</sup> Floor, 13,  
Nellie Sengupta Sarani (Lindsay St.),  
P.B. No. 9026,  
KOLKATTA – 700 087.

**Sub: Kulti-Sitarapur UG Coal Mine (5 MTPA in 1550 ha) of M/s W.B. Mineral Development Corp. Ltd. located in Raniganj Coalfields, district Bardhaman, West Bengal- Terms of Reference (TOR) – reg.**

Sir,

This is with reference to letter no. MDTC/PM-5/92-I (Env)/321 dated 10.07.2008 regarding the above-mentioned subject, which was considered by the Expert Appraisal Committee (Thermal & Coal Mining) in the meeting held on 27<sup>th</sup> –28<sup>th</sup> 2008. It was noted that the proposal is for opening a new underground coalmine of 5 MTPA in the Raniganj coalfields. The total mine lease area is 1550 ha of which 25 ha would be used for infrastructure including CHP and a township of 5 ha (which would be acquired) would be developed outside the leasehold.

It was informed during the presentation made before the Committee that the Underground mining would be by Longwall Method. Three Inclines would be developed for each Block. Mining would be planned to ensure that there is no subsidence below roads and railway line passing through the lease. Subsidence would also be kept within limits below areas with human habitation. Land required for infrastructure and the cross-country conveyor is non-forest and non-agricultural land. The mineralised area (1500 ha) for the UG mining would not be acquired. The mined coal would be transferred to surface through conveyor onto a bunker from where it would be transferred to the railway siding through tube conveyors for a distance of 3 km for which an area of 5 ha outside the lease would be acquired. The existing rail network passing through the lease would be used for coal transport. The project does not fall within an ecologically sensitive area. No new road is to be constructed for the project. Existing roads would be black topped. Total water req. is 25 m<sup>3</sup>/d. Expected life of mine is 20 years. Project does not involve R&R.

Based on the application along with documents and presentation thereon and discussions held, the Committee prescribed the following TOR:

- (i) An EIA-EMP Report should be prepared for a peak capacity of **5 MTPA** addressing the impacts of the project including the aspects of mineral transportation and issues of impacts on hydrogeology, plan for conservation of flora/fauna and afforestation/ plantation programme. Baseline data collection can be for any season except monsoon.
- (ii) The EIA-EMP report should also cover the impacts and management plan for the project

specific

activities on the environment of the region, and the environmental quality – air, water, land, biotic community, etc. through collection of baseline data and information, generation of baseline data on impacts for 5 MTPA of coal production based on approval of project/Mining Plan.

(iii) A Study area map of the core zone and 10km area of the buffer zone (15 km of the buffer zone in case of ecologically sensitive areas) delineating the major topographical features such as the land use, drainage, locations of habitats, major construction including railways, roads, pipelines, major industries/mines and other polluting sources, which shall also indicate the migratory corridors of fauna, if any and the areas where endangered fauna and plants of medicinal and economic importance are found in the area.

Map showing the core zone along with 3-5 km of the buffer zone) delineating the agricultural land (irrigated and unirrigated, uncultivable land (as defined in the revenue records), forest areas (as per records) and grazing land and wasteland and water bodies.

Contour map at 3m interval along with Site plan of the mine (lease/project area with about 3-5 km of the buffer zone) showing the various surface structures such as buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within/adjacent to the ML), green belt and undisturbed area and if any existing roads, drains/natural water bodies are to be left undisturbed along with details of natural drainage adjoining the lease/project and modification of thereof in terms of construction of embankments/bunds, proposed diversion/rechannelling of the water courses, etc., highways, passing through the lease/project area.

Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area. Impacts of project, if any on the landuse, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations.

Study on the existing flora and fauna in the study area carried out by an institution of relevant discipline and the list of flora and fauna duly authenticated separately for the core and buffer zone and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna. The flora and fauna details should be furnished separately for the core zone and buffer zone. The report and the list should be authenticated by the concerned institution carrying out the study and the names of the species scientific and common names) along with the classification under the Wild Life Protection Act, 1972 should be furnished.

Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working plan/scheme until end of mine life should be reflected on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps should also be included.

Impact of mining on hydrology, modification of natural drainage, diversion and channelling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.

Collection of one-season (non-monsoon) primary baseline data on environmental quality – air (SPM, RSPM, SO<sub>x</sub> and NO<sub>x</sub>), noise, water (surface and groundwater), soil.

Map of the study area (core and buffer zone) clearly delineating the location of various monitoring stations (air/water/soil and noise – each shown separately) superimposed with location of habitats, wind roses, other industries/mines, polluting sources. The number and location of the stations should be selected on the basis of the proposed impacts in the downwind/downstream/groundwater regime. One station should be in the upwind/upstream/non-impact non-polluting area as a control station. Wind roses to determine air pollutant dispersion and impacts thereof shall be determined. Monitoring should be as per CPCB guidelines and standards for air, water, noise notified under Environment Protection Rules. Parameters for water testing for both ground and surface water should be as per ISI standards and CPCB classification of surface water wherever applicable.

Impact of mining and water abstraction and mine water discharge in mine on the hydrogeology and groundwater regime within the core zone and 10km buffer zone including long-term modelling studies on the impact of mining on the groundwater regime. Details of rainwater harvesting and measures for recharge of

groundwater should be reflected wherever the areas is declared dark/grey from groundwater development.

Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the competent authority in the State Govt. and impacts vis-à-vis the competing users should be provided.

Impact of choice of selected use of machinery - and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations.

Impacts of mineral transportation – within and outside the lease/project. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, and their impacts on air quality should be shown in a flow chart with the specific points where fugitive emissions can arise and the specific pollution control/mitigative measures proposed to be put in place. Examine the adequacy of roads existing in the area and if new roads are proposed, the impact of their construction and use particularly if forestland is used.

Details of various facilities to be provided in terms of parking, rest areas, canteen, and effluents/pollution load from these activities. Examine whether existing roads are adequate to take care of the additional load of mineral and their impacts.

Examine the number and efficiency of mobile/static water sprinkling system along the main haul roads within the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality.

Impacts of CHP, if any on air and water quality. A flow chart of water use and whether the unit can be made a zero-discharge unit.

Conceptual mine closure plan along with the fund requirement for the detailed activities proposed there under. Impacts of change in land use for mining operations and whether the land can be restored for agricultural use post mining.

Study on subsidence, measures for mitigation/prevention of subsidence, modelling subsidence prediction and its use during mine operation, safety issues.

Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be furnished.

Details of cost of EMP (capital and recurring) in the project cost and for final mine closure plan. The specific costs (capital and recurring) of each pollution control/mitigative measures proposed in the project until end of mine life and a statement that this is included in the project cost.

Integrating in the Env. Management Plan with measures for minimising use of natural resources – water, land, energy, raw materials/mineral, etc.

Coal sample analysis of– (i) ash content, (ii) Sulphur content, (iii) Heavy metal content (Pb, Cr, As, Hg, Cd, etc.)

Public Hearing should cover the details as specified in the EIA Notification 2006, and include notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments by the proponent made should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.

Status of any litigations/ court cases filed/pending on the project.

The following general points should be noted:

- (i) All documents should be properly indexed, page numbered.
- (ii) Period/date of data collection should be clearly indicated.
- (iii) Authenticated English translation of all material in Regional languages provided/enclosed with the application.

After the preparation of the draft EIA-EMP Report as per the aforesaid TOR, the proponent shall get the Public Hearing conducted as prescribed in the EIA Notification 2006 and take necessary action for

obtaining environmental clearance under the provisions of the EIA Notification 2006.

The final EIA-EMP report submitted to the Ministry must incorporate the issues in TOR and that raised in Public Hearing. The index of the final EIA-EMP report, must indicate the specific chapter and page no. of the EIA-EMP Report where the specific TOR prescribed by Ministry and the issue raised in the P.H. have been incorporated.

- (vi) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter prescribing the TOR.
- (vii) The copy of the letter received from the Ministry on the TOR prescribed for the project should be attached as an annexure to the final EIA-EMP Report.
- (viii) Mining Questionnaire (posted on MOEF website) with all sections duly filled in shall also be submitted at the time of applying for EC.

Yours faithfully,

(Dr.T.Chandini)  
Director

Copy to: Chairman, West Bengal State Pollution Control Board, Paribesh Bhawan, 10A, Block LA, Sector-III, Salt Lake City, Kolkatta – 700098.

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To

Dated: 30<sup>th</sup> October 2008

**Shri A.K. Sen,**  
**M/s West Bengal Mineral Development Corp. Ltd.,**  
2<sup>nd</sup> Floor, 13,  
Nellie Sengupta Sarani (Lindsay St.),  
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Sir,

In continuation to this Ministry's letter dated 19.09.2008, the following para is introduced before the TOR conditions:

Since the toposheetts of the study area were not shown. It was informed that drilling has begun. The time frame for preparation of the geological report was not provided. Since the preparation of Mining plan cannot be taken up without geological reports, the Committee was of the view that the preparation of EIA-EMP should be deferred until the complete geological report is available and Mining Plan has been prepared. The issues given in TOR requires to be incorporated in the Mining Plan and approval of the same obtained from MOC while simultaneously completing formalities such as conduct of P.H. and preparation of final EIA-EMP Report as per TOR.

Yours faithfully,

(Dr.T.Chandini)  
Director

Copy to:

Chairman, West Bengal State Pollution Control Board, Paribesh Bhawan, 10A, Block LA, Sector-III, Salt Lake City, Kolkatta – 700098.