

No.11015/1001/2007-IA.II(M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
CGO Complex,
New Delhi-110510.

To

Dated: 17th December 2007

M/s Western Coalfields Ltd.

Coal Estate, Civil Lines,
NAGPUR – 440001.

**Sub: Consideration of Gokul OCP (1 MTPA of 767.17 ha) located in Tehsil Umrer
Dist. Nagour, Maharashtra- Terms of Reference (TOR) – reg.**

Sir,

This is regarding consideration of the aforesaid proposal in the EAC (T&C) meeting held on 28-29th Nov. 2007. It was noted that the proposal is for opening a new opencast coal mine of 1 MTPA capacity in a total lease area of 767.17 ha. The Committee was informed that of the total ML area, 712.61 ha is agri. land, Govt. land is 42.29 ha and 12.27 ha is forestland (zudpi jungle). The main agr. in the area is cotton and red chilli. The project involves change in topography by diversion of 2 roads of 3 km and 3.5 km length, diversion of one HTL and surface drainage by diversion of a nallah of 3 km and a canal of 2.5 km flowing through the ML. Mining method is opencast using shovel and dumper. There are no endangered flora and fauna reported in the area. Of the total ML area, quarry area is 291.21 ha, ext. OB dump is 123.90 ha, infrastructure is 10 ha, area for diversion of road is 39 ha, blasting zone is 90.53 ha, colony is 5 ha, future expansion of quarry is 77.92 ha and area required for rationalisation of boundaries is 129.61 ha. A total of 252.44 ha area would be developed with plantation of which 123.90 ha is of ext. OB dump, of a max. height of 60m, 200 ha is reclaimed backfilled area, 61 ha is in blasting zone, 35 ha in rationalisation area and the balance on vacant land, roads, colony, infrastructure. Ultimate working depth is 100m. Radius of influence as per theoretical estimates was 860m. Total estimated OB to be generated over life of mine is 135.84 Mm³ of which 94.09 Mm³ would be backfilled and the balance 41.75 Mm³ of OB would be stored in ext. OB dumps. Backfilling would begin from the 10th year onwards. At the post mining stage a void of 40 ha would be left as a water body. The project involves R&R of 365 PAFs of Piraya village. Life of the project is 17 years.

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

- (i) An EIA-EMP Report would be prepared for **1 MTPA rated capacity** based on the generic structure specified in Appendix III of the EIA Notification 2006.
- (ii) The EIA-EMP Report 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 data and information, generation of data on impacts including prediction modelling for the coal mine Block of 1 MTPA capacity of coal production based on approval of project/Mining Plan for 1 MTPA. Baseline data collection can be for any season except monsoon.
- (iii) The EIA-EMP Report would cover the proposed impacts of opencast and underground mining including safety issues and risk assessment and disaster preparedness and management plan.
- (iv) A map specifying locations of the State, District and Project location.
- (v) A Study area map of the core zone and 10km area of the buffer clearly delineating the major topographical features such as the land use, ecologically sensitive areas

such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance are found in the area, surface drainage of rivers/streams/nalas/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources.

- (vi) Land use map (1: 50,000 or 100,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note of the land use.
- (vii) Map showing the core zone delineating the agricultural land (irrigated and irrigated, uncultivable land (as defined in the revenue records), forest areas (as per records).
- (viii) Contour map of 3m intervals and Site plan of the mine showing the various proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area and if any, in topography such as existing roads, drains/natural water bodies are to be left undisturbed along with any natural drainage adjoining the lease and modification of thereof in terms of construction of embankments/bunds, proposed diversion/rechannelling of the water courses, etc., approach roads, major haul roads, etc.
- (ix) Break up of lease area as per different land uses and their stage of acquisition.
- (x) Break-up of lease area as per mining operations.
- (xi) Impact of changes in the land use due to the start of the combined projects since much of the land being acquired is agricultural land. Impact of diversion of road, HTL on the topography.
- (xii) Collection of one-season (non-monsoon) primary base-line data on environmental quality - air (SPM, RPM, SO_x and NO_x), noise, water (surface and groundwater), soil.
- (xiii) Map of the study area (core and buffer zone clearly delineating the location of various stations superimposed with location of habitats, other industries/mines, pouting sources. The number and location of the stations in both core zone should be selected on the basis size of lease area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water as per ISI and surface water as per CPCB guidelines.
- (xiv) 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. If the study area has endangered flora and fauna, then a comprehensive Conservation Plan should be prepared and furnished along with comments form the CWLW of the State Govt.
- (xv) Details of mineral reserves, geological status of the study are and the seams to be worked, ultimate working depth and progressive stage-wise working 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 be included.
- (xvi) Details of mining methods, technology, equipment to be used, etc., rationale for selection of that technology and equipment proposed to be used vis-à-vis the potential impacts.
- (xvii) Impact of mining on hydrology, modification of natural drainage, diversion and channelling of the existing rivers/water courses (including nallah and canal) flowing though the ML and adjoining the lease and the impact on the existing users and impacts of mining operations thereon. The radius of influence on groundwater regime

- due to impact of mining appeared to be high and a detailed hydrogeological study should be undertaken.
- (xviii) Detailed water balance should be provided. The break up of water requirement for the mine should be given separately. Mine discharge of 4320 m³/d is high. Mine discharge water should be treated before discharge and should be monitored at outlet points.
 - (xix) Source of water for use in mine, sanction of the competent authority in the State Govt. and impacts vis-à-vis the competing users.
 - (xx) Impact of mining and water abstraction use in mine on the hydrogeology and groundwater regime within the core zone and 10km buffer zone including long-term modelling studies on. Details of rainwater harvesting and measures for recharge of groundwater should be reflected.
 - (xxi) Impact of blasting, noise and vibrations.
 - (xxii) Impacts of mining on the AAQ, predictive modelling using the ISCT-3 (Revised) or latest model.
 - (xxiii) Impacts of mineral transportation – within and outside the lease along with flow-chart indicating the specific areas generating fugitive emissions. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop, management plan for maintenance of HEMM, machinery, equipment. Details of various facilities to be provided in terms of parking, rest areas, canteen, and effluents/pollution load from these activities.
 - (xxiv) OB management and post mining land use be relooked at so that the water body does not exceed 30m depth and the water reservoir area is also reduced by backfilling OB. Details of waste generation – OB, topsoil – as per the approved calendar programme, and their management shown in figures as well explanatory chapter with tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use. OB dump heights and terracing should be based on slope stability studies with a max of 28° angle as the ultimate slope. Sections of dumps (ultimate) (both longitudinal and cross section) with relation to the adjacent area should be shown.
 - (xxv) Impact and management of wastes and issues of rehandling and backfilling and progressive mine closure and reclamation.
 - (xxvi) Flow chart of water balance. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. Details of STP in colony and ETP in mine. Recycling of water to the max. possible extent.
 - (xxvii) Occupational health issues. Baseline data on the health of the population and measures for occupational health and safety of the personnel and manpower for the mine and TPP.
 - (xxviii) Disaster Management Plan.
 - (xxix) Integrating in the Env. Management Plan with measures for minimising use of natural resources – water, land, energy, etc.
 - (xxx) Progressive Green belt and afforestation plan (both in text, figures as well as in tables prepared by MOEF). And selection of species (local) for the afforestation/plantation programme based on original survey/land use.
 - (xxxi) Conservation Plan for the endangered/endemic flora and fauna found in the study area and for safety of animals visiting/residing in the study area and also those using the study area as a migratory corridor.
 - (xxxii) Final Mine closure issues, post mining land use and restoration of land/habitat to pre-mining. The conceptual Final Mine Closure should consider the eventuality that there is no expansion from dip side along with cost provisions in the project cost.
 - (xxxiii) Including cost of EMP (capital and recurring) in the project cost and for progressive and final mine closure plan.

- (xxxiv) Details of R&R. R&R plan should re-examine the monetary compensation being paid in lieu of employment. Detailed R&R Plan with data on the existing socio-economic status of the population in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and the schedule of the implementation of the R&R Plan.
- (xxxv) Public Hearing should cover the details of notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments made in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
- (xxxvi) In built mechanism of self monitoring of compliance of environmental regulations.
- (xxxvii) 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 provided in Regional languages.
- (iv) 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.
- (v) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter prescribing the TOR.
- (vi) 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.
- (vii) 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.

After the preparation of the draft EIA-EMP Report as per the aforesaid TOR, and the public Hearing conducted as prescribed in the EIA Notification 2006 and the proponent will take necessary action for obtaining environmental clearance under provisions of the EIA Notification 2006.

Yours faithfully,

(Dr.T.Chandini)
Director

Copy to:

Chairman, Maharashtra State Pollution Control Board, Kalapatru Point, 3rd & 4th Floor, Sion Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai – 40002.