

No.J-11015/194/2008-IA.II(M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
C.G.O.Complex,
New Delhi -110510

Dated: 27th April 2010

To
CGM (E&F)
M/s Western Coalfields Ltd.,
Coal Estate, Civil Lines,
NAGPUR - 440001.

Sub: Chattarpur I & II Underground Coal Mine Expansion Project (expansion from 0.41 MTPA to 1 MTPA and ML area) of M/s Western Coalfields Ltd. (WCL), located near village Chattarpur, Tehsil Ghoradongri, District Betul, Madhya Pradesh - environmental clearance ? reg.

Sir,

This has reference to letter No. 43011/29/2008-CPAM dated 28.04.2008 of Ministry of Coal forwarding your application for Terms of Reference (TOR) and subsequent letter of M/s WCL dated 23.05.2008 along with a revised application for TOR on the above-mentioned subject and this Ministry's grant of TOR vide letter dated 26.08.2008 and application of dated 22.12.2009 received for environmental clearance. The Ministry of Environment & Forests has considered your application. It is noted that EC was granted to Chattarpur-II UG project on 12.12.1994. The present proposal is for expansion of combined project of the two underground coalmines- Chattarpur I (641.20 ha) & II (184.138 ha) UG Expansion for a combined **expansion in production from 0.41 million tonnes per annum (MTPA) to 1 MTPA with increase in combined lease area from 356.37 ha to 825.338 ha**, of which 239.201 ha is forestland and 586.137 ha is Govt. land. Of the total combined lease area of **825.338 ha**, 16.888 ha is for surface rights (which includes 10.278 ha of forestland) and the entire ML areas of 825.338 ha is required for Mining Rights. The total forestland involved is 239.201 ha of which 91.03 ha falls in Chattarpur-I and 148.171 ha in Chattarpur-II. Forestry clearance has been obtained for 169.668 ha of which 51.213 ha falls in Chattarpur-I and 118.455 ha in Chattarpur-II and which includes the entire surface rights. Forestry clearance is to be obtained for the balance 69.533 ha of forestland. The project does not involve R&R. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 15 km buffer zone. The project does not involve modification of the natural drainage. Mining will be underground by Bord & Pillar method involving depillaring with caving. The expansion project does not involve change in land requirement, mining technology and displacement. Mineral transportation of **3030 TPD** of coal from mine in by belt conveyors and outside the mine is by road. Ultimate working depth of the mine is 280m below ground level (bgl). Mining has intersected water table, which is in the range of 4.05-15.35m bgl during pre-monsoon and 2.65-10.50m bgl during post-monsoon. Peak water requirement is 190 m³/d, which is to be met from mine water discharge. Balance life of the mine at the proposed rated capacity is 21 years. Public Hearing was held on 29.12.2008. The project has been approved by M/s WCL on 25.09.2009. The capital investment for the expansion project is **49.28 crores**.

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned **Chattarpur I & II Underground Coalmine Expansion Project of M/s WCL for expansion in production from 0.41 million tonnes per annum (MTPA) to 1 MTPA with increase in combined lease area from 356.37 ha to 825.338 ha** under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments and Circulars thereto and subject to conditions specified below:

A. Specific Conditions

- (i) No mining shall be undertaken beneath the balance 69.533 ha forestland until forestry clearance has been obtained.
- (ii) Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material.
- (iii) High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
- (iv) All plantation shall be carried out after the onset of monsoon.
- (v) Coal extraction shall also be optimised in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No coal depillaring shall be undertaken below areas of habitation.
- (vi) Subsidence shall be monitored closely and if subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement of the landowners.
- (vii) Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also be provided adequate retention period to allow proper settling of silt material.
- (viii) Water sprinkling system shall be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc. Mobile sprinklers shall be provided in major haul roads and with high levels of PM10/PM2.5.
- (ix) Major approach roads shall be black topped and properly maintained. A 3-tier plantation using native species which are effective as a shield in trapping fugitive dust shall be developed along all major roads, near CHP, coal bunker, infrastructure. A mist spray water sprinkling system shall be installed at the CHP and at transfer points.
- (x) Drills shall be wet operated only to avoid fugitive dust emissions.
- (xi) Areas along roads, infrastructure, along ML boundary and township outside the lease area, etc, shall be developed as green belt by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- (xii) Regular monitoring of groundwater level and quality of the mine area and the surrounding villages in the impact zone shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Parameters such as F, TDS shall be also monitored and if levels are found to be high shall be treated before discharging into surface water/land. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.

- (xiii) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring of water table indicates a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xiv) Mine discharge water particularly TDS shall be treated to conform to prescribed levels before discharge into the natural environment.
- (xv) ETP shall also be provided for treatment of effluents from workshop and the treated effluents shall be used for green belt development. An estimated 2000 m³/d of peak mine water shall be treated to prescribed standards before discharge into the surface waters/agricultural use.
- (xvi) Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.
- (xvii) For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhopal.
- (xviii) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests within 6 months of grant of environmental clearance.
- (xix) The project proponent shall undertake a socio-economic survey for identifying and taking up need based specific socio-economic activities/ programmes/ schemes, which are required in the area. Monitoring of the impacts of activities under CSR shall be carried out periodically. Educational centres shall be established in the area to create awareness and for organising workshops, etc.

B. General Conditions

- (i) No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.
- (iii) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM₁₀, PM_{2.5}, SO₂ and NO_x monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.
- (iv) Fugitive dust emissions (PM₁₀ and PM_{2.5}) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.

- (v) Data on ambient air quality (PM10, PM 2.5, SO2 and NOx) shall be regularly submitted to the Ministry including its Regional Office at Bhopal and to the State Pollution Control Board and the Central Pollution Control Board once in six months.
- (vi) Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.
- (vii) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.
- (viii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
- (ix) Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- (x) Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.
Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contraindications due to exposure to dust and to take corrective measures, if needed and records maintained thereof.
- (xi) A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- (xii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhopal.
- (xiii) The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- (xiv) A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (xv) State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
- (xvi) The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at <http://envfor.nic.in>.

3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

5. The above conditions will be enforced *inter-alia*, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules.

(Dr.T.Chandini)
Director

Copy to:

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Madhya Pradesh, Secretariat, Bhopal.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal ? 462016.
4. Chairman, Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony, Bhopal ? 462016.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. Shri M.K. Shukla, CGM, Coal India Limited, SCOPE Minar, Core-I, 4t Floor, Vikas Marg, Laxminagar, New Delhi.
8. District Collector, Betul, Government of Madhya Pradesh.
9. Monitoring File 10. Guard File 11. Record File

(Dr.T.Chandini)
Director