

No.J-11015/436/2006-IA.II(M)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan,  
C.G.O.Complex, Lodi Road,  
New Delhi -110003.

Dated: 17<sup>th</sup> May 2007

To  
Head of Department Env./CE(Civil),  
Environment Department,  
M/s Western Coalfields Ltd.,  
Coal Estate, Civil Lines,  
NAGPUR - 440001.

Sub: Rajur Underground Coal Mine Project (0.21 MTPA) of M/s Western Coalfields Ltd. (WCL), located near village Rajur, Tehsil Wani, District Yavatmal, Maharashtra- Environmental clearance - reg.

Sir,

This has reference to letter of Ministry of Coal & Mines No. 43011/147/2006-CPAM dated 08.12.2006 forwarding your application and letter of M/s Coal India Ltd. dated 11.01.2006 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It has been noted that the project is for production of coal in the existing Rajur Underground Coalmine Project at 0.21 MTPA involving a total lease area of 1695.60 ha, of which 1651.96 ha is agricultural land, 12.73 ha is forestland and 30.91 ha is Govt. wasteland. The mine requires renewal of lease. Forestry clearance is to be obtained with lease renewal. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found within the core zone and in the 10 km buffer zone. There is no reported Schedule-I fauna in the study area. River flows adjacent to mine lease. It is not proposed to modify the natural drainage. The project does not involve R&R. Area for UG mining is 1615.91ha. Surface area includes 68.24 ha for infrastructure which includes colony, 2 ha for roads, 3.45 ha for green belt and 6 ha for CHP. Mining will be underground by semi-mechanised method. Rated capacity of the mine is 0.21 million tonnes per annum (MTPA) of coal production. Mineral transportation of 500 TPD of coal from pithead to railway siding is by road. Ultimate working depth of the mine is 220 m below ground level (bgl). Water table is in the range of 4.50m- 18.60m bgl in the core zone and 1.00m -16.25 m bgl in the buffer zone. Mining will intersect water table. Peak water demand is 4435m<sup>3</sup>/d of water of which 3500 m<sup>3</sup>/d is for sand stowing. Source of water is mine sump/pit water. Balance life of the mine at the rated capacity is 30 years. Public Hearing was held on 29.04.2006. NOC has been obtained on-09.06.2006. The project has been approved by M/s WCL on 06.05.1997. Capital cost of the project is Rs. 10.85 crores.

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned Rajur Underground Coal Project of M/s WCL over a lease area of 1695.60 ha for production of coal of 0.21 MTPA rated capacity under Section 12 of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and under Para 2.1.1 of MOEF Circular dated 13.10.2006 subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

- (i) Mining shall be carried out as per statuette at a safe distance from the river/nallah flowing adjacent to the lease boundary.
- (ii) While extracting panels in the lower seam by UG method, all water bodies in the subsidence area shall be drained. Dewatering of the old goaves of the upper seam shall be continued as long as the lower seam is worked to prevent accumulation of large water bodies over working area.
- (iii) At the time of depillaring, protective bunds and garland drains shall be provided so that no water from the surface enters the subsidence area and the shaft.
- (iv) Sufficient coal pillars shall be left unextracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.
- (v) Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.
- (vi) No depillaring operation shall be carried out below the roads and village/ area with habitation found within the lease until they are relocated.
- (vii) 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 should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/suitable material.
- (viii) Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity should be designed keeping 50% safety margin over an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity should also provided adequate retention period to allow proper settling of silt material.



- (ix) Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc.
- (x) Drills should be wet operated only.
- (xi) Blasting should be practiced with use of delay detonators.
- (xii) A progressive afforestation plan shall be prepared and implemented over the mine lease area and shall include areas under green belt development, areas along roads, infrastructure, along ML boundary and township outside the lease areas, etc, by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (xiii) Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.
- (xiv) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xv) 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.
- (xvi) 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.
- (xvii) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

- (xviii) Consent to Operate shall be obtained before starting mining operations after fulfilment of the conditions imposed in NOC.

**B. General Conditions**

- (i) No change in mining technology and scope of working should 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 should be made.
- (iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO<sub>2</sub> and NO<sub>x</sub> monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.
- (iv) Data on ambient air quality (SPM, RPM, SO<sub>2</sub> and NO<sub>x</sub>) should 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.
- (v) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.
- (vi) Adequate measures should 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 should be provided with ear plugs/muffs.
- (vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May 1993 and 31<sup>st</sup> December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.
- (viii) Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.
- (ix) Environmental laboratory should 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 should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.

- (xi) A separate environmental management cell with suitable qualified personnel should 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 should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should 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 should 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 should 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

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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, New Delhi.
2. Secretary, Department of Environment, Government of Maharashtra, 15<sup>th</sup> Floor, New Admn. Bldg., Madam Cama Road, MUMBAI - 400032..
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arear Colony, Bhopal - 462016.
4. Chairman, Maharashtra State Pollution Control Board, Kalapataru Point, 3<sup>rd</sup> & 4<sup>th</sup> Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 400002.
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, 4<sup>th</sup> Floor, Vikas Marg, Laxminagar, New Delhi.
8. District Collector, Yavatmal Government of Maharashtra.
9. EI Division, Ministry of Environment & Forests, New Delhi.
10. Monitoring File 10. Guard File 11. Record File