

No.J-11015/308/2006-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:** Expansion of Dhorwasa Opencast Coal Mine Extension Project (production from 0.55 MTPA to 1.40 MTPA and lease area from 207.31 ha to 229.56 ha of M/s Western Coalfields Ltd. (WCL), located near village Dhorwasa, Tehsil Bhadravati, District Chandrapur, Maharashtra - environmental clearance - reg.

Sir,

This has reference to letter No. 43011/131/2006-CPAM dated 18.10.2065 of Ministry of Coal forwarding your application and your letter dated 25.01.2007 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. The proposal is for expansion in production from 0.55 million tonnes per annum (MTPA) to 1.40 MTPA and lease area from 207.31 ha to 229.56 ha. Of the total lease area, 180.87 ha consist of agricultural land, 26.44 ha of forestland and 22.25 ha is wasteland. Forestry clearance was obtained on 22.01.2001 for 22.44 ha of forestland. A township of 16 ha with 120 dwelling units exists at a distance of 3-4 km from mine site. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. Of the total lease area, area for excavation is 57.70 ha, 17.50 ha is storage for topsoil, 40 ha is for OB dumps, 2 ha is for infrastructure, 1 ha is for roads, 13 ha is for greenbelt, 6.80 ha is for embankment, 33 ha is for danger zone, 17 ha is for rationalisation area and 41.76 ha is area for future expansion. River Wardha flows at a distance of 500m from the ML boundary. The project involves modification of the natural drainage by construction of an embankment along the River. Project does not involve R&R. Mining will be opencast by semi-mechanised method. Expansion of the annual rated capacity of the mine is from 0.55 MTPA to 1.40 MTPA of coal production. CHP of the adjacent New Majiri-II A OC (10m from ML) and Chargaon OC (5 km) is to be used. Mineral transportation of 4245 TPD of coal is by road involving 900 tippers and light vehicles and from the CHP by rail. Present working depth is about 80m below ground level (bgl). Ultimate working depth of the mine is 105 m bgl. Water table is in the range of 5.75 m - 12.25 m bgl in the core zone and 1.0m - 16.97m bgl in the buffer zone. Mining has intersected water table. Peak water requirement is 235 m<sup>3</sup>/d, which is to

be met from mine pit water. Of the total OB generation, 10.48 Mm<sup>3</sup> of OB is already accumulated in one external OB dump of a maxm. of 60m height consisting of for stages of 15m each and of the balance 14.10 Mm<sup>3</sup> to be generated, 61% will be backfilled. Backfilling has already begun. Balance life of the mine at the proposed rated capacity is 5 years. Public Hearing was held on 27.10.2005. NOC has been obtained on 10.03.2006. The project has been approved by M/s WCL on 15.11.2005 at a rated capacity of 1.40 MTPA. The capital cost of the extension project is Rs. 6274.12 lakhs.

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned Dhorwasa Opencast Extension Coal Mine Project of M/s WCL for expansion in production of coal at 1.40 MTPA rated capacity involving a total lease area of 229.56 ha under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and under Para 2.1.1 of MOEF Circular dated 13.10.2006 and subject to conditions specified below:

**A. Specific Conditions**

- (i) Mining shall be carried out as per statuette at a safe distance from the Wardha river flowing close to the lease boundary.
- (ii) The embankment constructed along the river shall be of suitable dimensions and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.
- (iii) Topsoil shall be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.
- (iv) OB should be stacked at the earmarked one external OB dumpsite within ML area which shall be a maximum height of 60m only and consist of four benches of 15m each. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on an yearly basis.
- (v) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.

Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak rainfall and maximum discharge in the area adjoining the mine. Sump capacity should also provided adequate retention period to allow proper settling of silt material..

- (vi) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (vii) Drills should be wet operated only.
- (viii) Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.
- (ix) High efficiency bag filters/water sprinkling system to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc. shall be installed and operated effectively at all times of operation.
- (x) An area not less than 91.80 ha shall be brought under afforestation which includes reclaimed external OB dump (40 ha), backfilled area (32 ha), along ML boundary, along roads & infrastructure (15 ha), green belt (13 ha), embankment (6.80 ha) and area in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (xi) A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of which 32 ha shall be backfilled and afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. The balance 25.50 ha of decoaled void which is being converted into a water reservoir, shall be gently sloped along the upper benches, terraced and reclaimed with plantation. The outer periphery of the water body shall be fenced.
- (xii) The company shall obtain prior approval of CGWA/CGWB Regional Office for use of groundwater if any, for mining operations.
- (xiii) 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 two years and the results reported to this Ministry and to DGMS.

D - 4/6

- (xiv) 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
- (xv) A Final Mine Closure Plan along with details of Corpus Fund should be submitted immediately upon receipt of EC to the Ministry of Environment & Forests RO, Bhopal for approval.
- (xvi) Consent to Operate shall be obtained after fulfilment of the conditions imposed in the 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) Fugitive dust emissions (SPM and RPM) 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.
- (v) 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.
- (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

D-6/6

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, 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, Chandrapur, Government of Maharashtra.
9. EI Division, Ministry of Environment & Forests, New Delhi.
10. Monitoring File 10. Guard File 11. Record File