



**Ministry of Environment & Forests (MOEF)**

No. J-11015/331/2008-I.A. II (M)

Paryavaran Bhawan,  
CGO Complex,  
New Delhi-110510.

To,

Dated: 22<sup>nd</sup> October 2010

**M/s Western Coalfields Ltd.**  
Coal Estate, Civil Lines,  
NAGPUR - 440001.  
Maharashtra

**Sub: Expansion of Patansaongi UG Coal Mine Project (0.25 MTPA to 0.30 MTPA and ML area of 410.00 ha)) of M/s Western Coalfields Ltd., located in vill. Patansaongi, Tehsil Saoner, District Nagpur, Maharashtra - Environmental Clearance-regarding**

Sir,

This has reference to letter No 43011/66/2008-CPAM dated 31.07.2008 of Ministry of Coal forwarding your application for TOR, which was granted vide this Ministry's letter dated 23.10.2008 and your application for environmental clearance dated 08.05.2010 and letter dated 09.09.2010 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It is noted that the proposal is for expansion in terms of production capacity from 0.25 MTPA to 0.30 MTPA. The present application is based on maximum achievable production capacity within the existing ML area of 410 ha within the existing ML area of 410 ha. Of the total ML area of 410 ha, 375.00 ha is agriculture land and 35.00 ha is wasteland (Govt. land). No forestland is involved. Of the total ML area, surface rights are for 35.00 ha which consists of wasteland (Govt. land) and mineral rights are for 375.00 ha which is agriculture land. The main drainage of the area is controlled by easterly flowing River Kolar and Chandragandha. Few seasonal nalas mainly carrying the rain water during monsoon discharge into these Rivers. River Kolar flows at a distance of 2 KM away from project site and joins River Kanhan. No modification of the drainage is proposed. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. Mining will continue to be underground by Board & Pillar method with extraction of developed pillars in conjunction with hydraulic sand stowing. No disturbance of strata and subsidence are anticipated. Mineable reserve is 12.6 MT. Coal grade is D and E. Coal transportation of about 900 TPD from mine face to surface would be by a network of belt conveyors. Coal from overhead bunkers is fed into bunker through belt conveyor and from there to Thermal Power Plant through aerial ropeway/truck involving a distance of about 10km. Water table is in the range of 8.00-8.45 m bgl in core area & 2.30-

19.95 in buffer area during pre-monsoon and in the range of 7.30-7.95m bgl in core area and 1.75-18.05 m bgl in buffer area during post-monsoon in the study area. Peak water demand is 4850 m<sup>3</sup>/d of water of which, 3000m<sup>3</sup>/d is for mine operation/stowing, 250 m<sup>3</sup>/d for dust suppression, 200 m<sup>3</sup>/d is for green belt, 100 m<sup>3</sup>/d for fire fighting, 100 m<sup>3</sup>/d for others (CHP), and 1200 m<sup>3</sup>/d is for domestic purposes. The entire water requirements would be met from mine sump/pit water. No groundwater will be used. Mine water discharge will be 15050 m<sup>3</sup>/day. Balance life of the mine at the rated capacity is 25 years. No R&R is involved. Subsidence Prediction Modeling has been carried out. Fund for environment protection is Rs 32 lakhs. Public Hearing was held on 19.12.2009. Capital cost of the project is Rs. 12.4048 Crores. Project approval of M/s WCL was obtained on 25.09.2009.

2. The Ministry of Environment and Forests hereby accords environmental clearance for the above-mentioned **Patansaongi Underground Coal Mine Project of M/s Western Coalfields Ltd. for expansion in production from 0.25 MTPA to 0.30 MTPA within the ML area of 410 ha** under Section 7(ii) of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto subject to the compliance of the terms and conditions mentioned below:

**A. Specific Conditions**

- (i) 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.
- (ii) Mining shall be carried out as per statuette at a safe distance from the river/nallah flowing within/adjacent to the lease boundary.
- (iii) High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
- (iv) Coal extraction including depillaring shall be carried out with hydraulic sand stowing and as per statuette in areas where agricultural production is continuing, areas of habitation and water bodies, roads, etc.
- (v) Subsidence shall be monitored closely and if subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement with the landowners.
- (vi) Garland drains (size, gradient and length) around the safety areas such as mine opening and mine shaft and low lying areas and sump capacity shall 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 shall also be provided adequate retention period to allow proper settling of silt material.



- (vii) Water sprinkling system shall be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc. Major approach roads shall be black topped and properly maintained.
- (viii) A progressive afforestation plan shall be prepared and implemented over the mine lease area acquired and shall include areas under green belt development, areas along roads, infrastructure, along ML boundary and township etc, by planting native species in consultation with the local DFO/Agriculture Department.
- (ix) Regular monitoring of groundwater level and quality 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. 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. The quality of groundwater should be got analysed at random through laboratories recognised under the EPA Rules 1986.
- (x) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource, in case water table shows 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.
- (xi) 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.
- (xii) Activities under CSR undertaken for the neighbouring villages shall be for not less than Rs 5 per tonne of coal and the progress made thereon shall be uploaded on the company annually on the company website.
- (xiii) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

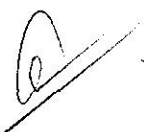
#### **B. General Conditions**

- (i) No change in 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 quantum of mineral coal and waste being produced 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 monitoring PM10, PM2.5, SO2 and NOx.



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) Data on ambient air quality (PM10, PM2.5, SO2 and NOx and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data 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. Random verification of samples through analysis from independent laboratories recognized under the EP Rules, 1986 shall be furnished as part of the compliance report.
- (v) 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.
- (vi) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, and treated so as to conform to the standards including for heavy metals before discharge 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. Oil and grease trap shall be installed before discharge of workshop effluents. Mine water shall be treated to prescribed limits in case discharged outside the premises
- (vii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.
- (viii) Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EP Rules, 1986.
- (ix) 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 contractions due to exposure to dust and to take corrective measures, if needed.
- (x) 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.
- (xi) 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.



- (xii) 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>
  - (xiii) A copy of the environmental clearance letter shall be marked to concerned Panchayat/Zila Parishad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website.
  - (xiv) A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
  - (xv) The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as SPM, RPM, SO<sub>2</sub> and NO<sub>x</sub> (ambient and stack if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.
  - (xvi) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.
  - (xvii) 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.
  - (xviii) The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MOEF by E-mail.
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. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.



(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 Arera 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. Dr. R.K. Garg, Advisor, Coal India Limited, SCOPE Minar, Core-I, 4<sup>th</sup> Floor, Vikas Marg, Laxminagar, New Delhi.
8. District Collector, Nagpur, Government of Maharashtra.
10. Monitoring File      11. Guard File      12. Record File