

FROM :

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**Ministry of Environment & Forests**

Paryavaran Bhawan,  
CGO Complex, Lodi Road  
New Delhi-110003.

**No. J-11015/228/2009-IA.II (M)**

Dated: 16<sup>th</sup> February 2011

To  
General Manager (Env.)  
**M/s Western Coalfields Ltd.,**  
Coal Estate, Civil Lines,  
NAGPUR-440001.

**Sub: Kolgaon OC Expansion Project (0.40 MTPA to 0.50 MTPA with 0.60 MTPA peak production and expansion in area from an ML area of 360 ha to 392.67 ha and 4.58 ha outside the ML) of M/s WCL located in Tehsil Wani, district Yavatmal, Maharashtra- Environment Clearance**

Sir,

This has reference to letter No 43011/33/2009 dated 17.07.2009 Ministry of Coal forwarding your application for Terms of Reference and this Ministry's grant of TOR vide letter dated 11.09.2009 and your application for environmental clearance vide letter no.WCL/ENV/HQ/10-C/256 dated 18.06.2011 on the above mentioned subject. The Ministry of Environment & Forests has considered the application. It is noted that an EC was granted on 12.04.2002 to the existing Kolgaon Open Cast Project of 0.4 MTPA capacity in ML area of 360 ha. The present proposal is for expansion of the Kolgaon Open Cast Coal Mine Project from 0.4 MTPA to 0.6MTPA peak production capacity and expansion in ML area from 360 ha to 392.67 ha. The main linkage for the project is MAHAGENCO. Of the total ML area of 397.25 ha, 390.39 ha is agricultural land and 2.28 ha is wasteland, in addition, 4.58 ha of land would be acquired outside the ML area for colony. No forestland is involved. Of the total ML area of 392.67 ha, 116.56 ha is for quarries, 65.20ha is for OB dump, 15.00 ha is for road and infrastructure, 41.00 ha is for blasting zone, 16.58 ha is for embankment, 57.00 ha is for future expansion of quarry, 79.06 ha is for rationalisation of mine boundary and (4.58 ha is required for colony out side the mining lease area). There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found within the 15 km buffer zone. River Penganga flows at a distance of 0.3 km away and River Wardha River flows at a distance of about 3 km from the mine.

Mining would be opencast by shovel-dumper combination. An estimated 1650 TPD of coal would be transported by 150 trucks/day covering a distance of 8 km to Ghughus Railway Siding. The mine is to be operated in two quarries-I and II and it is proposed to increase the depth of Quarry-I from 90m to 100m. Quarry-I, which is bounded by all side by faults, would be mined out first, which would be completed in the 6<sup>th</sup> year and thereafter Quarry-II would be mined. Present working depth is 75m and ultimate working depth is 100m. It is proposed to backfill the OB generated from Quarry-I in an area on east side. After mining is started in Quarry-II, OB generated in this quarry would be backfilled in Quarry-I void. During the post-mining stage, a void of 72.38 ha with a depth of 100 m would be created. It is proposed to expand the mine in the dip side after 7-8 years, as a new Kolgaon D expansion project, when the mine pit/void would be dewatered to recover the coal underneath. The total water requirement for the project is 425 m<sup>3</sup>/d (340m<sup>3</sup>/day for dust suppression, 15 m<sup>3</sup>/day is for others and 70m<sup>3</sup>/day is for domestic purpose). Ground Water table is 8.1-12.8m bgl (pre-monsoon), 6.7-7.7m bgl (post-monsoon). Grade of

coal is E. The total OB generation would increase from 28.21 Mm<sup>3</sup> to 39.28 Mm<sup>3</sup> in the expansion project, of which 34.97 Mm<sup>3</sup> OB would be stored in an external dump and 4.31 Mm<sup>3</sup> OB would be backfilled. There are 6 OB dumps of a max height of 60m with slope 28° in an area of 65 ha which would be reclaimed biologically using native species. In addition, 2 temporary topsoil dumps would be created which would be used for mine reclamation. At the post mining stage, an area of 160.77 ha would be afforested using native species. There are 33 land losers of agricultural land, who would be appropriately rehabilitated as per the latest CIL Policy. The project does not involve any displacement. Balance life of the mine is 11 years. A provision of Rs 5/T of coal has been made for CSR. Capital expenditure on EMP is Rs 239.24 lakhs and recurring expenditure is Rs 41.713 Lakhs. Public Hearing was held on 03.05.2011. The project has been approved by WCL on 12.06.2009. Capital Cost of the project is Rs 49.5942 crores.


2. The Ministry of Environment & Forests hereby accords environmental clearance for the above mentioned **Kolgaon Open Cast Coalmine Expansion Project of M/s Western Coalfield Limited from 0.40 MTPA to 0.50 MTPA production capacity with 0.60 MTPA peak production and expansion in ML area from 360 ha to 392.67 ha and 4.58 ha outside the ML** under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments and Circulars thereto issued thereon subject to the compliance of the terms and conditions mentioned below:

**A. Specific Conditions**

- (i) No washery shall be established within the ML without prior environmental clearances from this Ministry.
- (ii) Topsoil shall be stacked properly with proper slope at earmarked site(s) of the two topsoil dumps shall not be kept active and shall be used within a year of its generation for reclamation and development of green belt.
- (iii) The embankment constructed along the river boundary shall be of suitable dimensions and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.
- (iv) OB shall be stacked at the six earmarked external OB dumpsite(s) only covering an area of 65 ha and shall not exceed the max. height of 60m consisting of benches of 15m each. The ultimate slope of the dump shall not exceed 28°. Bamboo and other native species shall be planted on OB dumps for slope stability. Monitoring and management of the reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on yearly basis.
- (v) Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilised for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly.

Garland drains (size, gradient and length) 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 site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
- (vi) Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- (vii) Drills shall be wet operated.



- (viii) The project authorities shall ensure that the roads used for mineral transportation are black topped and are properly maintained. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads and major haul roads.
- (ix) The capacity of trucks used for transportation shall minimum 25T trucks and shall be mechanically covered
- (x) Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.
- (xi) A progressive afforestation plan shall be implemented covering an area not less than 160.77 ha, which includes reclaimed external OB dump and embankment area and (71.8 ha), backfilled area (30 ha), along ML boundary, along roads and infrastructure (3 ha), embankment (16.85 ha) and within vacant land (55.92 ha) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and avenue plantation along the main approach roads to the mine.
- (xii) Of the total quarry area of 116.56 ha, the backfilled quarry area of 65.20 ha shall be reclaimed with plantation using native species and a void of 72.38 ha proposed at the post mining stage and to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- (xiii) No groundwater shall be used for the mining operations.
- (xiv) Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. 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.
- (xv) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xvi) Sewage treatment plant shall be installed in the colony. ETP shall also be provided for workshop and CHP wastewater.
- (xvii) 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/institution within the district as within a period of one year and the results reported to this Ministry and to DGMS as part of compliance report.
- (xviii) For monitoring land use pattern and for post mining land use, a time series of landuse 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
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season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhopal.

- (xix) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years before mine closure for approval, in case the dip side extension project is not planned/implemented.
- (xx) The project authorities shall in consultation with the panchayat of the local villages identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine. A budgetary provision of Rs 5 per tonne of coal shall be earmarked for CSR activities. The villages to be adopted under CSR shall include Kolagaon, Takli, Chikhali, Jugad, Sindola and Sakhara. The budget and expenditure thereon village-wise and activity-wise for CSR shall be displayed on WCL website and also included as part of the Annual Plan.
- (xxi) The company shall have a well laid down Corporate Environmental Policy approved by the Board of Director. The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringement/deviation/violation of the environmental norms/conditions. To provide for checks and balances the company should have a well laid out system of reporting on non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

#### **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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> 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 (PM<sub>10</sub> and PM<sub>2.5</sub>) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, loading and unloading/transfer points shall be provided and properly maintained.
- (v) Data on ambient air quality (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>) 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 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 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 till the mechanically converted trucks introduced by company.
- (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 Collectors 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, New Delhi.

FAX NO. :

FROM :

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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, New Delhi
8. District Collector, Yavatmal, Government of Maharashtra.
9. Monitoring File 10. Guard File 11. Record File.