

No.J-11015/31/2009-IA.II(M)
Government of India
Ministry of Environment & Forests

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

Dated: 22nd July 2009

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

Sub: Ballarpur Underground Coal Mine Expansion Project (expansion from 0.60 MTPA to 0.76 MTPA of M/s Western Coalfields Ltd. (WCL), located near village and Tehsil Ballarpur, District Chandrapur, Maharashtra - environmental clearance - reg.

Sir,

This has reference to letter No. 43011/125/2008-CPAM dated 12.01.2009 of Ministry of Coal forwarding your application seeking environmental clearance under Section 7 (ii) of the EIA Notification 2006 and subsequent letter dated 15.07.2009 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It is noted that the application is for seeking environmental clearance under section 7 (ii) for expansion in production in the existing Ballarpur Underground Coal Mine Project from 0.60 million tonnes per annum (MTPA) to 0.76 MTPA with no change in lease area of 1619.66 ha. The project was granted EC on 21.03.2007 for 0.60 MTPA production capacity over the existing ML area of 1619.66 ha. The project consists of three operating underground mines - Ballarpur 3 & 4 Pit, Mana Incline and Nandgaon, of which the production capacity of two of the mines Mana Incline and Nandgaon is to be increased from 0.15 MTPA to 0.20 MTPA and 0.19 MTPA to 0.30 MTPA respectively. Of the total lease area of 1619.66 ha, of which 1223.02 ha is agricultural land, 123.71 ha is forestland and 272.93 ha is wasteland. Forestry clearance has been applied for. 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 hydraulic sand stowing. The expansion project does not involve change in land requirement, mining technology, displacement, manpower, and no fresh source of water. Mineral transportation of 2333 TPD of coal is by trolley from mine face to surface to CHP located near the Incline mouth and thereafter by road (973 TPD) and by rail (1360 TPD) from railway siding located at a distance of 2 km. Ultimate working depth of the mine is 265 m below ground level (bgl). Detailed subsidence prediction Study has been carried out. Mining has intersected water table, which is in the range of 3.2-14.10 m bgl during pre-monsoon and 1.0-4.50m during post-monsoon. Peak water requirement is 9529 m³/d, which is to be met from mine water discharge. Balance life of the mine at the proposed rated capacity is 17 years. Public Hearing was held on 26.10.2005 for 0.60 MTPA capacity project. The project has been approved by M/s WCL on 05.11.2008. The capital investment for the expansion project is 15.1835 crores.

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned Ballarpur Underground Coalmine Expansion Project of M/s WCL for expansion in production of coal from 0.60 MTPA to 0.76 MTPA rated capacity by increasing production in two of the mines - Mana Incline and Nandgaon from 0.15 MTPA to 0.20 MTPA and 0.19 MTPA to 0.30 MTPA respectively within the existing total lease area of 1619.66 ha under Section 7 (ii) of the Environmental Impact Assessment Notification, 2006 and subsequent amendments and Circulars thereto and subject to conditions specified below:

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A. Specific Conditions

- (i) No mining shall be undertaken in 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) 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.
- (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 of the landowners.
- (vi) 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 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. Mobile sprinklers shall be provided in major haul roads and with high levels of SPM/RSPM.
- (viii) Major approach roads shall be black topped and properly maintained. A 3-tier plantation 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
- (ix) Drills shall be wet operated only to avoid fugitive dust emissions.
- (x) 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 area, etc, by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- (xi) 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.
- (xii) 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.

- (xiii) Mine discharge water particularly TDS shall be treated to conform to prescribed levels before discharge into the natural environment.
- (xiv) 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.
- (xv) 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 season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhopal.
- (xvi) 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.
- (xvii) 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 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 monitoring SPM, RSPM, SO₂ and NO_x. 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. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in SPM and RSPM etc. shall be carried out at least one in six months.
- (iv) Data on ambient air quality (SPM, RSPM, SO₂ and NO_x and heavy metals such as Hg, As, Ni, Cr, etc) 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 recognised 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, treated so as to conform to the standards prescribed under

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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.

- (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) Appropriate measures shall be taken to avoid hazards of fire and explosions due to methane gas.
- (ix) 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 analysed through a laboratory recognised under EP Rules, 1986.
- (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 contractions due to exposure to dust and to take corrective measures, if needed.
- (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 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>.
- (xiv) A copy of the environmental clearance letter shall be marked to concerned Panchayat/ Zila Parishad/Municipal Corporation or Urban Local Body/ 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.
- (xv) 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.
- (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. 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) shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.

(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 31st 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, 15th 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, 3rd & 4th 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, 4th Floor, Vikas Marg, Laxminagar, New Delhi.
8. District Collector, Chandrapur, Government of Maharashtra.
9. Monitoring File 10. Guard File 11. Record File.

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