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BY SPEED POST

No. J-11015/46/2009-IA.II (M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
CGO Complex, Lodi Road
New Delhi-110510.

Dated: 31 January, 2013

To

The General Manager (Environment),
M/s Western Coalfields Ltd.,
Coal Estate, Civil Lines,
NAGPUR - 440001.

Sub: Penganga Opencast Mining Project [3.00 MTPA (Normative) and 4.50 MTPA (Peak) production capacity in an area of 781.00 ha] of M/s Western Coalfields Ltd located near village Wirur, Tehsil Korpana, District Chandrapur, Maharashtra-Environmental Clearance-regarding

Sir,

This has reference to letter No. 43011/7/2009-CPAM dated 11.02.2009 of Ministry of Coal forwarding the application for Terms of Reference (TOR) and this Ministry's letter dated 15th April 2009 granting TOR to the above mentioned Project and subsequent letter from M/s WCL bearing no. WCL/ENV/HQ/10-J/310 dated 21.07.2012 submitting therewith the final EIA/EMP for Environmental Clearance for the above mentioned subject.

2. The Ministry of Environment & Forests has considered the application. It is noted that the application is for environmental clearance for new Opencast Project named Penganga Opencast in terms of 3.00 MTPA (Normative) and 4.50 MTPA (Peak) production capacity in an area of 781.00 ha. It has been noted, as has been presented by the proponent, that:

- (i) The total ML area is 781 ha, out of which 670.61 ha is agriculture land (655.61 ha is within ML area and 15 ha is outside ML area), 110.39 ha is Government land. The land use during mining of 781 ha area, 240.10 ha for excavation area, 208.60 ha is for external dump, 22 ha is for infrastructure, 95.30 ha is for approach roads/embankment, 15.00ha for Township / Colony, 200 ha is for blasting zone and rationalization Area. The life of the project is 19 years.
- (ii) The main drainage of the area is controlled by the Penganga river, which is flowing northerly and is also demarcating the western limit of the block. A few seasonal nalas are passing through the area and their flow direction is from south to north.
- (iii) Depth of mine will be 20-170 mt. The gradient of seam is 1 in 7.5 to 1 in 14. The mineable reserve 44.06 MT. The average stripping ratio would be 3.61m³/t. The seam is 90 m thick. The grade of coal is 'F' grade. The mining would be by surface miner and shovel & dumper combination.
- (iv) Total OB generated at the end of mining will be 158.97 Mm³ in an area of 240.10 ha, 108.50Mm³ OB in external dump including embankment will be dumped in an area of 208.60ha and 50.47 Mm³. The total OB will be accommodated in de-coaled void as internal dump with 82.50 ha area. Backfilling and ext. The OB dumping would begin from 4th year and only internal dumping from

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the 16th year. External OB dump with projected height of dumps 90m/45m. At the end of the mine life, 82.50 ha would be backfilled reclaimed area, 157.60 ha will not be reclaimed area for void.

- (v) The water level in core area would be 2.45-16.40m bgl (Pre-monsoon) and 1.65 -9.5 m bgl (Post-monsoon). The total peak water requirement would be 850 m³/day out of which 610 m³/day would be industrial and 240 m³/day would be for domestic use. Mine water discharge during monsoon season would be 10500 m³/day.
- (vi) Out of the total 208.60 ha area for external OB dump, 175 ha area would be reclaimed with plantation, 60 ha area undisturbed area (brought under plantation), 272.30 ha area around buildings and infrastructure including internal roads of the total 351.10 ha area covered with total 877750 no of plants.
- (vii) The coal transportation would be by road.
- (viii) The R&R consists of 350 PAFs from Wirur village. The Wirur village is located centrally in the proposed mine area and is proposed to be relocated to a new site (under mutual agreement & consent and as per CIL's R&R policies). Total budget for R&R would be Rs 52.6808 Crores. The CSR would be Rs 5/T of Coal.
- (ix) The cost of Environmental Protection Measures (Capital cost) would be Rs 35 Lakh and annual recurring cost would be Rs 35 Lakh. The capital cost of project would be Rs. 339.7706 Crore.
- (x) There is no forest land involved in project and there are no ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries. There are no endangered or endemic species are reported in the area.
- (xi) The Public Hearing was held on 03.03.2012. The proponent has assured to take appropriate action to the concerns raised during public hearing.

3. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned Penganga Opencast Coal Mine Project of M/s Western Coalfield for (3.00 MTPA (Normative) and 4.50 MTPA (Peak) production capacity in an area of 781.00 ha) under the provisions 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) The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.
- (ii) There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.
- (iii) OB shall be stacked at two earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing 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.
- (iv) 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 undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads,
 - (ix) 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.
 - (x) A Progressive afforestation plan shall be implemented covering an area of 351.10 ha, which includes reclaimed external OB dump (208.60 ha), backfilled area (82.50 ha), along ML boundary, along roads and infrastructure (29.00 ha), embankment and within vacant land/blast zone (31.00 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 a 3-tier avenue plantation along the main approach roads to the mine.
 - (xi) An estimated 158.97 Mm³ of OB will be generated during the entire life of the mine. Out of which 108.50 Mm³ of OB will be dumped in two external OB Dump in an earmarked area covering 208.60 ha of land. The maximum height of external OB dump for hard OB will not exceed 90 m and that for soft OB shall not exceed 45 m. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.
 - (xii) Of the total quarry area of 240.10 ha, the backfilled quarry area of 82.50 ha shall be reclaimed with plantation and a void of 157.60 ha at a depth of 170 m which is proposed 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 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 existing 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 specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.
- (xviii) Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.
- (xix) 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.
- (xx) A detailed 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.
- (xxi) The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.
- (xxii) Corporate Environment Responsibility:
- The Company shall have a well laid down Environment Policy approved by the Board of Directors.
 - The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
 - To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (xxiii) Additional Conditions:-
- The proponent should backfill the entire OB and restore the area for agriculture purpose,
 - The CSR to be enhanced to Rs 5/T with escalation factor each year with one time Capital Cost of CSR as 1.40 Crores . A letter in this regard should be submitted to the MoEF.
 - The entire OB dump at site of mining should be restored as agriculture land.
 - The coal transportation should be by mechanically covered trucks.
 - Bulk loading arrangement should be provided at railway siding.

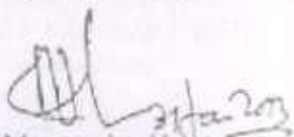
f) The proponent should address the issues raised during public hearing.

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 of production for quantum of mineral coal 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_{10} , $PM_{2.5}$, SO_2 and NO_x 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. In addition, CO and CH_4 shall also be monitored within the underground coal mine and records thereof maintained and uploaded on the company website and also submitted to MOEF, RO, Bhopal.
- (iv) Fugitive dust emissions (PM_{10} and $PM_{2.5}$) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.
- (v) Data on ambient air quality (PM_{10} , $PM_{2.5}$, SO_2 and NO_x) 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 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.
- (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.
- (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 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.

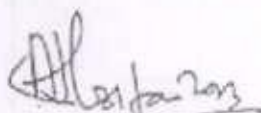
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- (xiii) The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring 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 Collector's 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>.
4. The Ministry or any other competent authority may stipulate any further condition for environmental protection.
5. 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.
6. 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. Manoranjan Hota)
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 Arera 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. Dr. R.K. Garg, Advisor, Coal India Limited, SCOPE Minar, Core-I, 4th Floor, VikasMarg, Laxminagar, New Delhi.
8. District Collector, Chandrapur, Government of Maharashtra.
9. Monitoring File 10. Guard File 11. Record File.


(Dr. Manoranjan Hota)
Director