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**Government of India**  
**Ministry of Environment & Forests**

Paryavaran Bhawan,  
C.G.O.Complex, Lodi Road  
New Delhi -110003.  
Dated: 6<sup>th</sup> February, 2013

To

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

**Sub: Inder UG to Opencast Expansion Mining Project (0.60 to 1.20 MTPA (Peak) production capacity in an area of 463.80 ha) of M/s Western Coalfields Ltd located near village Tekadi, Tehsil Parseoni, District Nagpur, Maharashtra-Environmental Clearance**

Sir,

This has reference to letter No. 43011/5/2010-CPAM dated 18.01.2010 of Ministry of Coal forwarding the application for environmental clearance under Section 7 (ii) of the EIA Notification 2006 and letter dated 09.06.2009 on the above-mentioned subject. The Ministry of Environment & Forests has considered the application. It has been noted that the application is for environmental clearance u/s 7 (ii) of the EIA Notification 2006 for expansion in production in the existing Inder UG to Opencast Coalmine Expansion Mining Project from 0.60 to 1.20 MTPA (Peak) production capacity in an area of 463.80 ha. Environmental clearance was obtained for Inder Extension OCP with rated capacity of 0.60 MTPA in an area of 463.80 ha on 9.06.2006. The proponent has informed that:

- (i) Of the total 463.80 ha of ML Area, 391.27 ha is agricultural land, 10.80 ha is wasteland. 61.73 ha has already been acquired under adjacent Gondagaon OC would be merged with Inder OCP. Of the total ML area of 463.80 ha, 94.50 ha is for quarry, 161.05 ha is for external OB Dump, 10.00 ha is for Infrastructure, 14.50 ha for embankment, 12.00 for internal Roads etc, Danger Zone, Rationalization Area & Future Extension area would cover 171.75 ha. The peak capacity of the mine is 1.20 MTPA.
- (ii) River Kanhan flows alongside the mine at a distance of 2 km. An embankment has been already constructed in the existing project with 0.3 Mm<sup>3</sup> OB over 14.50 ha area.
- (iii) The expansion project does not involve change in lease area, mining technology, in the generation of total OB and dump area, or modalities of technical and biological reclamation of dumps. The expansion project also does not involve additional manpower, or equipment or water requirement for expansion in production. The expansion would be undertaken by outsourcing of manpower and equipment. The project does not involve modification of the natural drainage is proposed in the expansion project.

- (iv) The rated capacity of the mine is 1.20 million tonnes per annum (MTPA) of coal production. Mining is opencast by mechanized method involving shovel-dumper. Ultimate working depth of the mine is 150 m below ground level (bgl). Stripping ratio 1:6m Thickness of top seam 3.25 (average). The rated capacity of the mine is 1.2 Million Tonnes Per Annum (MTPA) of coal production will be achieved in 4<sup>th</sup> year.
- (v) The coal transportation of 4545 TPD of coal is by trucks covered with tarpaulin from Mine to Dumri Railway Siding at a distance of 15.60 km and thereafter totally by railway wagons to the Customer.
- (vi) Water table is in the range of near surface-18 m bgl during pre-monsoon and 2-20 m bgl during post monsoon. The total water requirement for the expansion project would be industrial 700 m<sup>3</sup>/day; domestic requirement is 300 m<sup>3</sup>/day. This quantity will be met from Mine pumped out water.
- (vii) In the proposed expansion mine 61.99 Mm<sup>3</sup> of overburden will be removed. Total overburden will be dumped externally as due to steep gradient of coal seams (1 in 3.5) and unfavourable geo – mining conditions namely limited width of quarry & presence of multiple seams, no internal dumping is possible. The maximum height of External OB Dump would be 60 m in two stages with 30m bench height each and the final angle of overall slope would be 28 degrees. At the end of Mine life the void would be 94.50 ha at a depth of 150 m. The external OB dump of an area of 161.05 ha will be covered with plantation in addition to green belt development of 62.00 ha in undisturbed area.
- (viii) No separate coal handling plant has been provided in the project. The R&R for village Tekadi involves 650 PAFs at a total cost which would be Rs 992 lakhs and would be completed in next 4- 5 years.
- (ix) The WCL board has approved the proposed expansion in capacity on 18.09.2009.
- (x) There will be resettlement of 650 families of Village. A budgetary provision of Rs. has been made for R & R of Tekadi Village.
- (xi) The cost of pollution control measures are Rs. 61.000 lakhs and the annual recurring cost is Rs. 15.00 lakhs. The capital cost of the project is Rs. 3691.78 lakhs
- (xii) The balance life of the mine at 1.20 (1.25) MTPA rated capacity is 9 years.

2. The Public Hearing was held on 11.04.2012.

3. There is no forestland involved and there are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 15 km buffer zone.

4. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in its 57<sup>th</sup> meeting held on 17-18 September, 2012 for granting Environmental Clearance. The Ministry of Environment & Forests hereby accords environmental clearance to the Inder UG to Opencast Coal Mine Expansion Project of M/s Western Coalfield for expansion in production from 0.60 MTPA to 1.20 MTPA and lease area from 402.07 ha to 463.80 ha under the provisions of the 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. 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. The mining operations shall not extend beyond 463.80 ha of the lease area until the R&R for village Tekadi has been completed and compensation paid to land oustees as per norms not less than that laid out under the National R&R Policy,
- iv. 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.
- 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.
- vi. 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.
- vii. 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.
- viii. Drills shall be wet operated.
- ix. (vii) 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,
- 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 of 240.55 ha, which includes reclaimed external OB dump (161.05 ha), along ML boundary, along roads and infrastructure (17.50 ha), embankment and within vacant land/blasting zone (62.00 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.
- xii. Of the total quarry area of 94.50 ha, which will remain as void at a depth of 150 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 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.

- 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. R&R of village Tekadi involving 650 PAFs shall be implemented within an agreed time-frame as per norms not less than that prescribed in the National R&R Policy.
- 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:
  - a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
  - b) 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.
  - c) 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.
  - d) 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.

## **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<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. In addition, CO and CH<sub>4</sub> 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<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, wagon loading, dump trucks (loading and unloading) 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.
- (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.
- (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>.

5. The Ministry or any other Competent Authority may stipulate any further condition for environmental protection.

6. 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.

7. 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. The Secretary, Ministry of Coal, Shastri Bhawan, 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, Chandrapur, Government of Maharashtra.
9. Monitoring File    10.    Guard File    11.    Record File.

(Dr. Manoranjan Hota)  
Director

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