

No.J-11015/187/2005-IA.II (M)  
Government of India  
Ministry of Environment and Forests

Paryavaran Bhavan  
C.G.O.Complex,  
Lodi Road, New Delhi-110 003

Dated 16<sup>th</sup> August 2005

To,

Chief General Manager (Envt.)  
Mahanadi Coalfield Limited,  
Jagriti Vihar, P.O.U.C.E., Burla,  
District Sambalpur-768 018  
ORISSA.

Subject: Expansion of Belpahar Open Cast Coal Mining Project of M/s. Mahanadi Coalfields Limited located in Village(s) Darlipali, Chharla & Jurabaga (South), Tehsil Banaharpali, District Jharsuguda, Orissa-environmental clearance reg.

Sir,

This has reference to the Coal India Ltd., New Delhi letter No. CIL/DLI/ENV/2005/56 dated 25.04.2005 and subsequent letters dated 07.04.2005 and 03.06.2005 and Mahanadi Coalfields Ltd. letter No. MCL/HQ/ENV/MoEF/2005/257 dated 14.05.2005 on the subject mentioned above. The Ministry of Environment & Forests has considered the environmental clearance application. It has been noted that the proposal is for enhancement of production capacity of the mine. The total lease area of the project is 1444.053 ha out of which 125.313 ha is forestland, 558.23 ha an agricultural land, 720.51 ha is wasteland and 40.0 ha is surface water body. Area proposed for mining is 606.503 ha, 55.33 ha for OB dumps, 382.51 ha for infrastructure and 399.71 ha others (259.91 ha for safety zone and 139.0 ha for rationalisation of project boundary). No ecologically sensitive area such as national park/sanctuary/biosphere reserve etc. reported in the core as well as buffer zone of the project. There are three villages in the core zone of existing Belpahar (2 MTPA) namely Daripali, Chharla and Jurabaga (South). It has been envisaged that there is no village in the core zone of expansion project and displacement of population in the expansion project is not involved. The annual targeted production capacity of the mine is 4.5 million tonnes. Working is open cast by mechanised method using dragline shovel-dumper and surface miner. Blasting with short delay detonators initiated by shock tube initiation system and site mixed slurry explosives is involved. Peak water requirement is 4075 m<sup>3</sup> /day out of which 920 m<sup>3</sup>/day is being met from integrated water supply scheme of Ib Valley Coalfields and remaining 1155 m<sup>3</sup>/day of industrial requirement is being met from the treated mine discharge water and treated industrial effluent. It has been envisaged that a total of 156.55 mm<sup>3</sup> of OB will be removed during the expansion period, which will be concurrently backfilled. There will be no external dump in respect of the expansion project. NOC from the State Pollution Control Board obtained on 24.04.2003 and 08.01.2004 for 4.5 MTPA production. The Mahanadi Coalfields Ltd. Board has approved project report for 4.5 MTPA production on 13.03.2003. Public hearing held on 07.03.2003 for enhancement of production from 2.0 MTPA to 4.5 MTPA. In principle forestry clearance obtained on 26.11.1991. Capital cost of the project is Rs.23.68 crore.

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Envt. cl. file  
SOha

2. The Ministry of Environment and Forests hereby accords prospective environmental clearance to the above mentioned coal mining project of M/s Mahanadi Coalfields Limited for 4.5 MTY production by opencast method involving total lease area of 1444.053 ha under the provisions of the Environment Impact Assessment Notification, 1994 as amended on 04.05.1994 and 10.04.1997 subject to strict compliance of the terms and conditions mentioned below:

**A. Specific conditions**

- (i) The environmental clearance is subject to approval of the State Landuse Department, Government of Orissa for diversion of agricultural land for non-agricultural use.
- (ii) The environmental clearance is subject to grant of forestry clearance for diversion of forestland.
- (iii) Top soil should be stacked with proper slope at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitation of mined out areas.
- (iv) The old OB dumps of project (2.0 MTY) should be reclaimed technically and biologically. The over burden generated during the expansion phase should be concurrently backfilled in the decoaled area and there should not be any new OB dump created during this expansion phase.
- (v) Check dams and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil and mineral dumps. The water so collected should be utilized for watering mine area, roads, green belt, development etc. The drains should be regularly desilted and maintained properly.  
 Garland drain (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.
- (vi) Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (vii) Plantation should be raised in an area of 710.435 ha by planting the native species around the ML area, OB dump sites, backfilled area, safety zone, infrastructure, project boundary etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (viii) The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board, South Eastern region, Bhubneshwar.

- (ix) Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year i.e January, April-May, August and November and the data thus collected may be sent regularly to Ministry of Environment and Forests, Central Ground Water Authority and South Eastern region, Central Ground Water Board, Bhubneshwar.
- (x) The project authorities should obtain prior approval of the competent authority for drawal of 920m<sup>3</sup>/day potable water from the Integrated Water Supply Scheme of Ib Valley coalfield.
- (xi) The project authorities should meet the water requirement of nearby village(s) in case the village wells go dry due to de-watering of the mine.
- (xii) Coal handling plant should be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (xiii) Consent to operate should be obtained from SPCB before starting mining activities.
- (xiv) Drills should either be operated with dust extractors or should be equipped with water injection system.
- (xv) Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xvi) Vehicular emissions should be kept under control and regularly monitored.
- (xvii) Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to MOEF and its regional office.
- (xviii) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.
- (xix) Land oustees and land losers if any, shall be compensated as per the R&R plan approved by the CIL & State Government.
- (xx) The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna namely wolf (Canis lepus) reported in the buffer zone and other endangered fauna if any,

spotted in the study area in consultation with the concerned forest officials. Action plan for conservation of endangered fauna should be prepared and submitted to the Ministry and its Regional Office within 3 months.

## **B. General Conditions**

- (i) No change in mining technology and scope of working should 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 should be made.
- (iii) Atleast four ambient air quality monitoring stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>, and CO monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>, and CO) should be regularly submitted to the Ministry including its Regional Office at Bhubneshwar and to the State Pollution Control Board/Central Pollution Control Board once in six months.
- (iv) Drills should either be wet operated or with dust extractors.
- (v) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangements on haul roads, wagon loading, dumps, loading & unloading points should be provided and properly maintained.
- (vi) Adequate measures should be taken for control of noise levels within prescribed standards. Workers engaged in blasting and drilling operations, operations of HEMM, etc., should be provided with ear plugs/muffs.
- (vii) Industrial wastewater (workshop and waste water from the mine) should 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. Oil and grease trap should be installed before discharge of effluents from workshop.
- (viii) Acid mine water, if any has to be treated and disposed of after conforming to the standard prescribed the competent authority.
- (ix) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

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Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to coal dust and take corrective measures, if needed.

- (x) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- (xi) A separate environmental management cell with suitable qualified personnel should be set up under the control of a senior Executive, who will report directly to the Head of the organization.
- (xii) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purposes. Year-wise expenditure should be reported to the Regional Office, Bhubneshwar of the MOEF and to the Ministry.
- (xiii) The Regional Office of this Ministry located at Bhubneshwar shall monitor compliance of the stipulated conditions. The Project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing requisite data/information/monitoring reports.
- (xiv) A copy of the clearance letter will be marked to the concerned Panchayat /local NGO, if any, from whom any suggestions/representation has been received while processing the proposal.
- (xv) The project authorities should inform to the Regional Office located at Bhubneshwar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (xvi) State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's/Tehsildar's Office for 30 days.
- (xvii) The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue 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 web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubneshwar

3. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of 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.

(SATISH C. GARKOTI)  
Additional Director

Copy to:

1. Secretary, Ministry of Coal, Government of India, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment, Government of Orissa, Secretariat, Bhubneshwar.
3. Secretary, Department of Mines and Geology, Government of Orissa, Secretariat, Bhubneshwar.
4. Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3 Chandrashekharpur, Bhubaneshwar-751023.
5. Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneshwar-751012.
7. Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
8. District Collector, Jharsuguda, Orissa.
9. Shri M.K.Shukla, Chief General Manager, Coal India Limited, Core-I, 4<sup>th</sup> Floor, SCOPE Minar, Vikas Marg, New Delhi-110092
10. EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
11. Monitoring File.
12. Guard File.
13. Record File.

(SATISH C. GARKOTI)  
Additional Director