



No.J-11015/4/94-JA.II (M)
 Government of India
 Ministry of Environment and Forests

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

Dated the 2nd May 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 Ananta Open Cast Coal Mining Project of M/s. Mahanadi Coalfields Limited located in Village(s) Hensamul, Dera, Purunia, Chandpur and Nakhetrapur, Tehsil Talcher in Angul District of orissa- environmental clearance req.

Sir,
 This has reference to the Ministry of Coal, Government of India letter No. 43011/1/94-CPA dated 04.01.1994 and subsequent letter No. 43011/17/2001-CPAM dated 19.12.2002 and your letters dated 11.08.1994, 24.06.1995, 13.12.1999, 29.05.2000, 13.02.2001, 23.01.2002, 03.04.2002, 12.03.2003, 12.11.2003, 30.11.2004, 14.12.2004, 12.02.2005 and 28.02.2005 on the subject mentioned above. The Ministry of Environment & Forests has considered the environmental clearance application. It has been noted that the total land required for the project is 808.65 ha out of which 691.091 ha is lease area and 117 559 ha is an area acquired out side the lease for residential colony and settlement. Out of the total lease area of 691.09 ha , 190.74 ha is an agricultural land , 62.67 ha is forestland, 394.911 ha is wasteland, 25.87 ha is surface water body and 16.90 ha is others (settlement). Area proposed for quarrying is 373.892 ha and 23.20 ha area is kept for OB dumps, 90.0 ha for infrastructure, 203.999 ha is for safety zone for blasting. Forestry clearance for diversion of 62.67 ha of forestland obtained on 19.11.2004. No National Park/Wildlife Sanctuary/ Biosphere reserve is located within core & buffer zone of the mine lease area. One village namely Hensamul comprising a population of 998 people are in the core zone. Rehabilitation of 370 families has already been made by providing 386 jobs in MCL (as on 20.03.2004). The annual targeted production capacity of the mine is 8.0 million tonnes. Working will be open cast by mechanised method involving blasting. Ultimate working depth will be 115 m bgl. Total peak water requirement for the project is 1765m³/d, out of which 455 m³/d will be met from integrated water supply scheme of Talcher Coalfield and remaining from the mine water sump. The project involves removal of an estimated 38.75 million m³ of OB, which will be concurrently back-filled. NOC from the State Pollution Control Board obtained on 12.05.2004. Public hearing held on 12.01.2004. MCL Board has approved project report on 13.03.2003 for annual targeted capacity of 8.0 million tonnes. Capital cost of the project is Rs.203.48 crores.

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 8.0 MTY production by opencast method involving total land requirement of 808.65 ha under the provisions of the Environment Impact

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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) 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.
- (iii) OB dumps should be stacked at earmarked dump site(s) only and should not be kept active for long period. Proper terracing of OB dump should be carried out so that the overall slope will come down to 28 degree. The excavated area should be backfilled concurrently with the mining operation from first year onwards. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests on yearly basis.
- (iv) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained properly.

Garland drains of appropriate size should be constructed, to collect surface run-off from the OB and waste dump site(s) and taken to settling pond before discharge.
- (v) 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 rain fall data.
- (vi) Green belt should be raised in an area of 431.699 ha by planting the native species around the ML area, OB dump sites, backfilled area, safety zone, infrastructure, colony etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (vii) 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.
- (viii) 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.

- (ix) The project authorities should obtain prior approval of the competent authority for drawal of 455m³/day from the Brahmani river under Integrated Water Supply Scheme for the project.
- (x) 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.
- (xi) 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.
- (xii) Consent to operate should be obtained from SPCB before starting mining activities.
- (xiii) Vehicular emissions should be kept under control and regularly monitored.
- (xiv) 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.
- (xv) 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.
- (xvi) Land oustees and land losers shall be compensated as per the R&R plan approved by the CIL & State Government.

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, SO₂, NO_x, 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, SO₂, NO_x, 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 19th May 1993 and 31st 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.

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.

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- (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>.
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.



(Dr. T. Chandini)
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. Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3 Chandrashekharpur, Bhubaneswar-751023.
4. Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
5. Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
6. Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
7. District Collector, Angul, Orissa.
8. Shri M.K. Shukla, Chief General Manager, Coal India Limited, 407/8, Surya Kiran, 15 Kasturba Gandhi Marg, New Delhi-110 001.