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No.J-11015/45/96-IA.II(M)
Government of India
Ministry of Environment & Forests

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

Dated the 6th June 2003

To
Director (Technical),
Mahanadi Coalfields Ltd.,
At/P.O.-Jagriti Vihar, Burla,
District Sambalpur,
ORISSA- 768 020.

Subject: Bhubaneswari opencast coal mine (10.0 MTY) of M/s Mahanadi Coalfields Ltd. located at Village(s) Nakulbaspur, Ambamunda, Balugaon-Khamar, Kandhal, Anadipur, Hensamul, Jilinda, Naraharipur, Longijoda, Madanmchanpur, Alhadnagar (Uninhabited), Bira Ramchandrapur and Khandulbahal, Tehsil Talcher, District Angul of Orissa - environmental clearance - reg.

Sir,

This has reference to the Ministry of Coal's letters No. 43011/45/91-CPA dated 24.12.1993, 26.03.1996 and 17.11.1998 and MCL letters dated 27.02.1996, 28.10.1998, 07.09.1999, 27.10.1999, 10.03.2000, 05.08.2000, 28.02.2001, 01.09.2001, 09.04.2002, 04.06.2002, 13.07.2002, 21.08.2002, 24.08.2002, 28.01.2003, 04.03.2003 and 25.04.2003 on the subject mentioned above. The Ministry of Environment & Forests has examined the application. It has been noted that the total land requirement for the project is 808.294 ha, out of which 675.390 ha is non-forestland and 132.904 ha is forestland. After deducting 32.0 ha area for residential colony and 117.57 ha residential site, the total lease area comes 658.724 ha of which 525.82 ha is non-forestland and 132.904 ha forestland. Out of the 132.904 ha forestland, stage-I forestry clearance had been accorded for 112.521 ha (up to 25th years of mine operation), therefore environmental clearance is restricted to 638.341 ha area only. Township is outside the mine lease area, about 5-km from the mine site comprising an area of 32 ha. Annual production capacity of the mine is 10.0 million tonnes. Working will be opencast by mechanised method using shovel dumper combination. The project involves displacement of 1012 families comprising population of 4657 people from three villages namely Hansamul, Jilinda. The R&R will be followed as per the norms of the State Government of Orissa and CIL. It has been mentioned that about 19045 m³ /day of OB will be generated. Backfilling of OB will start from the 5th year of the production and continue till the end of mine life. Total water requirement for the project envisaged is 2770 m³ /day out of which 970 m³ /day will be met from Bramhani River through Integrated Water Supply Scheme and the

C (T) Secretariat

Dr. No. 4421 dt. 9.6.2003

CMV/7/13
10-06-03

G.M. (Env.)
C.G.M. (Mining) (P)
21/6/03

Mr. S. Thakur
Pl. send copies to Area Engineer
Office & make necessary
arrangements

remaining 1800 m³ /day will be met from accumulated water in the huge mine voids from different underground mines of Talcher Coalfield. Consent to Establish from the Orissa State Pollution Control Board has been obtained on 22.04.2000. The Ministry of Coal has given its approval to the project report on 11.04.2002. Capital cost of the project is Rs. 762.81 crores.

2. The Ministry of Environment and Forests hereby accords environmental clearance to the above mentioned mechanised opencast coal mine of M/s Mahanadi Coalfields Limited for 10.0 million TPA production involving lease area of 638.341 ha only under the provisions of the Environment Impact Assessment Notification, 1994 as amended on 04.05 1997 and 10.04.1997 subject to the compliance of the terms and conditions mentioned below:

A. Specific conditions

- (i) Top soil should be stacked with proper slope at earmarked site(s) and adequate measures should be used for reclamation and rehabilitation of mined out area.
- (ii) OB dumps should be stacked at earmarked dump site(s) only and should not be kept active for long period. The total height of the dumps should not exceed 90m, each stage should preferably be of 15m but should not exceed 20m. Overall slope of the dump should not exceed 28°. Concurrent back-filling should be started from the fifth year of operation. 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.
- (iii) 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 utilised for watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained properly.

Garland drains (size, gradient and length) and sump capacity should 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 should also provide adequate retention period to allow proper settling of silt material.

- (iv) 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.

- (v) A detailed mine decommissioning plan should be submitted to the Ministry of Environment and forests 5 years in advance of closure for approval.
- (vi) A green belt of adequate width should be raised by planting the native species around the ML area, coal handling plant, roads, OB dump sites, etc., in consultation with the local DFO/Agriculture Department. The density of the tree should be around 2500 plants per ha.
- (vii) Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers. The monitoring should be done four times a year in pre-monsoon (April/May), monsoon (August), post-monsoon (November) and winter (January) seasons. Data thus collected should be submitted to the Ministry of Environment & Forests and Central Ground water Board quarterly.
- (viii) Coal handling plant (CHP) 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.
- (ix) Drill should be wet operated or with dust extractors and Controlled blasting should be practiced.
- (x) Project authority should undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed mine.
- (xi) Coal Drills should be operated with dust extracted or should be wet operated.
- (xii) A comprehensive R&R plan should be submitted to the Ministry as per the final package finalized in consultation with the State Government for rehabilitation of project effected families within 3 months.
- (xiii) 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.
- (xiv) Before commencing the work, the proponent should obtain the sanction of the power and water from the concerned authorities and submit the same to the Ministry.
- (xv) Sewage Treatment Plant should be installed for the colony. ETP should also be provided for workshop and CHP waste water.

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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) Five ambient air quality-monitoring stations should be established in the core zone as well as in 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) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangements on haul roads, wagon loading, dump trucks (loading & unloading) should be provided and properly maintained.
- (v) Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM, etc., should be provided with ear plugs/muffs.
- (vi) Industrial waste water (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.
- (vii) Acid mine water, if any has to be treated and disposed of after conforming to the standard prescribed by the competent authority.
- (viii) 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.

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- (ix) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- (x) 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.
- (xi) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to the Ministry and its Regional Office located at Bhubneshwar.
- (xii) 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.
- (xiii) 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.
- (xiv) 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.
- (xv) 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.
- (xvi) 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 at Bhubneshwar.

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.

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5. The above conditions will be enforced, *inter-alla*, 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.

Yours faithfully,

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(Dr.T.Chandini)

Additional Director

Copy to:

1. Secretary, Ministry of Coal & Mines, Department of Coal, Government of India, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Orissa, Bhubaneswar.
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 Arjan Nagar, Delhi-110032.
5. Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118 Nirakancha Nagar, Unit-VIII, Bhubaneswar-751012.
6. Member Secretary, Central Ground Water Authority, Ministry of Water Resources, A-2, W-3, Curzon Road Barracks, New Delhi-110001.
7. District Collector, Angul District, Government of Orissa.
8. ✓ Shri M.K.Shukla, Chief Engineer(Env.Engineering), Coal India Limited, 407/3, Surya Kiran, 19 Kasturba Gandhi Marg, New Delhi-110 001
9. Advisor (EI), Ministry of Environment and Forests, New Delhi
10. Monitoring File.
11. Guard File.
12. Record File.
13. CCM, IBM, Nagpur


(Dr.T.Chandini)
Additional Director

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