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No. J -11015/109/2003-IA.II (M)  
Government of India  
Ministry of Environment and Forests

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

Date the 3<sup>rd</sup> January 2006

To,

Shir N.C. Verma  
General Manager (Envt. & Forest.)  
M/s Central Coalfields Limited,  
Darbhanga House,  
Ranchi-834 001  
Jharkhand

Subject: Amrapali opencast coal mining project of M/s Central Coalfields Ltd. located in part of village Khumarang Khurd, Khumarang Kalan, Ursu, Binglat, Honhe, Tehsil Pachra Block on the east and Koed block on the west, District Chatra, Jharkhand - environmental clearance reg.

Sir,

This has reference Ministry of Coal letter No. 43011/13/2002-CPAM dated 13.06.2002 and your letter No. GM(Env.&Forest)2003/789 dated 17.06.2003 and subsequent letters dated 08.03.2005, 22.08.2005, 22.09.2005 and 19.11.2005 on the subject mentioned above. It has been noted that the proposal is for opening of a new mine and accorded site clearance by the Ministry on 20.08.2004. Total mining lease area of the project is 1426.08 ha, out of which 793.08 ha is forestland, 157 ha is wasteland, 51 ha is surface water bodies and 425 ha is others (settlements etc.). An area of 46.70 ha for township has also been included in the lease area. Area proposed for mining is 861.36 ha, 89.16 ha area is kept for OB dumps, 14.56 ha for infrastructure, 42.25 ha for roads, 179 ha for railway siding, 20.33 ha for CHP, 46.70 ha for township and 172.2 ha is for others (nallah diversion embankment of garland drain, safety zone etc.). No ecologically sensitive area such national park/sanctuary/biosphere reserve etc. reported within 10 km radius of the project. Working will be open cast by mechanised method using dragline and shovel-dumper combination involving controlled blasting. Ultimate working depth of the mine is 135 m bgl. The envisaged rated capacity of the mine is 12 MTY. Approximately 544 households comprising a population of 3228 people from 5 villages are in the core zone. Displacement of population and R&R is involved. Water table is in the range of 3-12 m bgl (pre monsoon) and 33-6.0 m bgl (post monsoon). Working will intersect ground water table and 3000 m<sup>3</sup>/day is the likely discharge from the mine during the lean period and 4000 m<sup>3</sup>/day during the monsoon period. Peak water requirement of the project is 3143 m<sup>3</sup>/day out of which 950 m<sup>3</sup>/day will be met from ground water and remaining 2193 m<sup>3</sup>/day from mine sump water. A total of 459.68 million m<sup>3</sup> of OB will be generated throughout the mine life, of which 418.630 million m<sup>3</sup> would be placed as internal dump and remaining 41.10 mm<sup>3</sup> as an external dump in an area of 82 ha. Backfilling will start after 10<sup>th</sup> year. NOC from the State Pollution Control Board obtained on 09.06.2003 for production capacity of 12 MTPA involving lease area of 1426.08 ha. Public hearing held on 02.04.2003. Project report approved by CIL Board on 27.12.2002. Capital cost of the project is Rs.131125 lakhs. ....2/-

  
**DEVENDRA PRASAD**  
Project Officer  
Amrapali Project



2. The Ministry of Environment & Forests hereby accords environmental clearance to the above mentioned coal mining project of M/s Central Coalfields Ltd. for annual production capacity of 12 million tones of coal involving total mining lease area of 1426.08 ha under the provisions of the EIA Notification 1994 and its subsequent amendments issued under Environment (Protection) Act, 1986 subject to implementation of the following conditions/safeguards.

#### **B. Specific Conditions**

- (i) The environmental clearance is subject to grant of forestry clearance for diversion of 793.08 ha forestland.
- (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 shall not exceed 28 degree. Backfilling should start from 10<sup>th</sup> years 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 six monthly 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 drain (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) 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.

- (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 rainfall data.
- (vi) Green belt should be raised in area of 526 ha by planting the native species around the ML area, OB dumps, coal handling plant, roads etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per ha.

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- (vii) 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.
- (viii) Suitable embankment of proper dimensions should be constructed to protect the area from flood water of river Barki during rainy season.
- (ix) The project authority should implement suitable water conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- (x) 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 - pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground Water Authority and Regional Director Central Ground Water Board.
- (xi) Permission from the competent authority should be obtained for drawal of ground water for domestic use.
- (xii) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, CGWB.
- (xiii) Appropriate mitigative measures should be taken to prevent pollution of Barki river in consultation with the State Pollution Control Board.
- (xiv) 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.
- (xv) Sewage treatment plant should be installed for the colony. ETP should also be provided for wastewater from workshop and CHP.
- (xvi) Consent to operate should be obtained from SPCB before starting production from the mine.
- (xvii) The project authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed mine.
- (xviii) 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.
- (xix) Vehicular emissions should be kept under control and regularly monitored. Overloading of trucks be avoided to stop spillage. The loaded trucks be covered with tarpaulin sheets to prevent spillage of coal.

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- (xx) Land oustees and land losers should be compensated as per the State Government norms and CIL Policy.
- (xxi) 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
- (xxii) The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as python, baaz, eagle, peacock reported 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.
- (xxiii) 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.

**B. General conditions**

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.
- (iii) Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest department and experts.
- (iv) Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub> & 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> & CO) should be regularly submitted to the Ministry including its Regional office at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.
- (v) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, loading & unloading points should be provided and properly maintained.
- (vi) Drills should either be operated with dust extractors or should be equipped with water injection system.

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- (vii) Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operation of HEMM, etc should be provided with ear plugs/muffs.
- (viii) Measures for safety should be provided for storage, handling and use of explosives during the project period.
- (ix) Acid mine water, if any, has to be treated and disposed of after conforming to the standard prescribed by the competent authority
- (x) 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 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 workshop effluents.
- (xi) 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 dust and take corrective measures, if needed.

- (xii) 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.
- (xiii) 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 Bhubaneshwar.
- (xiv) The Regional Office of this Ministry located at Bhubaneshwar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
- (xv) A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom and suggestion / representation has been received while processing the proposal.
- (xvi) State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.

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P. S. PRASAD  
Project Officer  
Amrapali Project

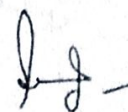


(xvii) The project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental 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 Bhubaneshwar.

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 (S)


**Copy to:**

1. Secretary, Ministry of Coal, Government of India, Shastri Bhawan, New Delhi.
2. Secretary, Department of Mines & Geology, Government of Jharkhand, Secretariat, Ranchi.
3. Secretary, Department of Environment, Government of Jharkhand, Secretariat, Ranchi.
4. Chief Conservator of Forests(Central), Ministry of Environment & Forests, Regional Office(EZ), A/3, Chandra Shekhar Bhubaneshwar - 751 003.
5. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-1100032.
6. Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
7. Chairman, Jharkhand State Pollution Control Board, T.A. Building, HEC Complex, P.O. Dhurwa, District Ranchi, Jharkhand.

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8. Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
9. District Collector, Chatra District, Jharkhand.
10. Shri M.K.Shukla, Chief General Manager, Coal India Limited, Core-I, 4<sup>th</sup> Floor, SCOPE Minar, Vikas Marg, New Delhi-110092.
11. EI Division, Ministry of Environment and Forests, Paryavaran Bhavan , C. G. O. Complex, Lodi Road, New Delhi-110 003 .
12. Monitoring File.
13. Guard File.
14. Record File.

  
DEVENDRA PRASAD  
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