

No. J-11015/238/2010-IA.II(M)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan,  
CGO Complex, Lodi Road,  
New Delhi-110003.

To,

Dated: 6<sup>th</sup> February, 2013

The General Manager (E&F)  
**M/s Bharat Coking Coal Ltd.,**  
Koyala Bhawan, Dhanbad,  
Jharkhand

**Sub. : Cluster VII (combined capacity 6.227 MTPA with a peak prodn. of 8.16 MTPA in a combined ML area of 2127.7 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, dist. Dhanbad, Jharkhand (EC based on TOR granted on 09.12.2010) (excluding Kustore UG and East Bhuggatdih)**

**Sir,**

This is with reference to the letter no.43011/27/2010-CPAM dated 02.07.2010 along with the application for Terms of Reference (TOR) and this Ministry's letter dated 09.12.2010 granting the TOR. Reference is also invited to the letter no. BCCL/GM (Env.)/EMP F-2012/270 dated 06.04.2012, 12.05.2012, and 04.07.2012, for environmental clearance on the above-mentioned subject.

2. The Ministry of Environment & Forests has considered the application. It is noted that the proposal is for opening a new cluster VII consists of 14 mines of which 5 are opencast mines and 9 are underground, out of which 6 underground mines are operating and 3 underground are closed for production in combined ML area of 2127.70 ha and production capacity of 6.227 MTPA (normative) and 8.16 MTPA (peak). The proponent has informed that:

- i. This is for the renewal of lease for 14 mines. The details of 14 mines are as given below:

Cluster VII mines						
S.N.	Name of Project	Status of Mine	Prod. Capacity (MTPA)	Peak prod. (MTPA)	ML Area (ha)	Life of Mine (years)
1.	Dhansar UG	Operating	0.372	0.484	174.12	34
2.	Dhansar OC	Operating	0.800	1.040		2
3.	Kusunda OC	Operating	2.00	2.600	247.70	27
4.	Industry UG	Closed	--	--	137.20	-
5.	Alkusa UG	Operating	0.115	0.150	101.77	30
6.	Ena OC	Operating	0.170	0.221	181.30	20
7.	South Jharia/ Rajapur OC	Operating	1.300	1.690	207.48	20
8.	Burragarh UG	Operating	0.170	0.221	147.83	20
9.	Simalbahal UG	Operating	0.250	0.325	178.13	20
10.	Hurriladih UG	Operating	0.090	0.117	127.17	13
11.	Bhutgoira UG	Proposed to be re-opened	0.360	0.468	131.67	23
12.	Kustore UG	Closed in 2003	--	--	250.71	20
13.	East Bhuggatdih	Closed in 2006	--	--	242.62	-

14.	Vishwakarma OC (it will be operational after closure of Dhansar OC)	Proposed	0.700	0.910	43.5 (within Dhansar & industry LH)	11
<b>TOTAL</b>			<b>6.227</b>	<b>8.161</b>	<b>2127.70</b>	

- ii. Cluster VII is located in East Central part of Jharia Coalfields in district Dhanbad. The cluster is bound in the east by cluster VIII mines of BCCL and in the north by habitation and Barakar measures, in the West by cluster XI mines of BCCL and in South by IISCO & TISCO mines. Kari Jore (a stream) passes through the cluster. The area is drained by Kati nala which flows across the block and join Khudiya nalla towards southwest.

<b>Major Project Parameters of Cluster VII mines</b>														
Particular	Name of Mines													
	Dhansar		Kusunda OC	Industry UG	Alkusa UG	Ena OC	South Jharia/Rajapur OC	Burra garh UG	Sim alba hal UG	Hurriladih UG	Bhutgoira UG	Kustore UG	East Bhuggatdih	Vishwakarma OC
	UG section	OC section												
Max depth(m)	165	65	185	130	300	200	102	365	285	320	500	235	225	90
Method of mining	Bord & Pillar	Shovel-dumper combination	Shovel-dumper combination	NA	Bord & Pillar/SDL	Shovel-dumper combination	Shovel-dumper combination	Bord & Pillar/SDL	Bord & Pillar/SDL	Bord & Pillar	Bord & Pillar/SDL	NA	NA	Shovel-dumper combination
Grade of coal	C	W-III	W-IV/NL W-III	-	NLW-IV	W-II	NLW-III/D	W-II	W-II	W-II	S-II to W-III W-IV to E	W-I V	W-IVT O NL W-II	NLW-IV, W-III
Mineable Reserve MT	13.37	1.63	53.39	7.86	7.35	30.41	29.35	4.0	13.13	1.2	6.83	13.69	17.7	6.52
Production in (1993-94) in MT	0.053	0.56	0.283	0.055	0.114	0.347	0.32	0.09	0.16	0.197	NIL	0.192	0.2	NA
Production in 2009-	0.096	0.78	0.849	NA	0.09	0.168	1.2	0.022	0.147	0.033	NIL	NIL	NIL	NA

10														
Production in 20010-11	0.111	0.993	1.773	nil	0.09	0.34	1.00	0.042	0.127	0.059	NA	NA	NA	NA
Proposed peak Production	0.484	1.04	2.6	NA	0.149	0.221	1.69	0.221	0.325	0.117	0.488	NIL	NIL	0.91
Cost of Production Rs/T	3667.38	977.6	475	-	2884	2744	766	14857	4643	10368	2245.53	-	-	977.6

LAND USE FOR CLUSTER VII			
S.N.	Type of Land Use	Land use (ha)	Post-Mining Land use (ha)
1.	Running quarry	108.16 + 93.89	Nil
2.	Abandoned Quarry	49.15 + 41.61	Nil
3.	Ext. OB dump	27.31	Nil
4.	Service Buildings	27.25	2.28
5.	Coal Dump	11.30	0.36
6.	Road & Rail	70.73	68.41
7.	Homestead Land	214.48	188.49
8.	Agricultural land	Nil	Nil
9.	Forestland	Nil	Nil
10.	Plantation	216.91	1382.22
11.	Water Body	25.30	99.05
12.	Barren Land	1241.65	381.49
	<b>TOTAL</b>	<b>2127.70</b>	<b>2127.70</b>

- iii. A total area of 794.09 ha would be reclaimed and afforested. Eco-restoration of BCCL mine areas is to be implemented in two phases over a period of 10 years, of which, Phase-I is from 2011-16 and Phase-II from 2016-2021. During Phase-I, development of a model restoration plantation is being carried out and thereafter 90 ha area of the area would be restored by BCCL in their 3 mining areas. During Phase-II (2016-2021), replication/expansion of proposed restoration models in the 126 ha area spread over 13 mines area of BCCL would be taken up.

Details of Rehabilitation in Cluster VII		
S.N.	Parameter	Details
1.	Total Voids	15.486 Mm3
2.	Total External OB	12.32 Mm3 (Already accumulated)
3.	Total Unstable Sites	71
4.	Total Affected Areas	5.607 Km <sup>2</sup>
5.	No. of Houses to be rehabilitated	13605
6.	Fire Area	1.87 Km <sup>2</sup>
7.	Fire affected Sites	31
8.	Land for Resettlement	62.432 ha (BCCL land) + 61.009 ha (Non-BCCL land)
9.	Cost	Rs 529.47 crores

Major Issues of Cluster-VII		
S.N	Major Env. Issues	Mitigation measures and Benefit
	Voids (269.27 ha)	219.67 ha Backfilling and 49.6 ha water body
1.	Ext. OB Dumps (27.31ha)	External OB dump will be used for backfilling.
3.	Fire/Unstable area with 560.7 ha in 71 sites)	Dig out fire and stabilize at the cost of Rs 26176 Lakhs.
4.	Loss of coal (10% locked in barriers)	Recover 8.51 MT from barriers
5.	Reclamation /Mine closure	10 ha plantation. Carried out every year. (Funds allocated for mine closure as per MOC guidelines and adopted by BCCL @Rs 1 lakhs /ha in case of U/G mine and Rs 6 lakhs/ha in case of OCP mines) A total of Rs 7350.71 Lakhs has been earmarked for mine closure of the cluster.
6.	CSR Rs. 311.35 Lakhs per year@ Rs 5/T of coal	

- iv. The ground water level is in the range from of 0.94 to 19.20 m bgl (pre-monsoon) and 0.70 to 3.05m bgl (post-monsoon) in the core zone. Total water requirement of Cluster VII is 12682 m<sup>3</sup>/day, of which 6791m<sup>3</sup>/day is for industrial use and 5881 m<sup>3</sup>/day is for domestic use. The existing natural water body would be in 25.30 ha area. However, in the post mining stage, void left in an area of 99.05 ha with water at 15-20 mt depth will be for community use/Pisciculture.
- v. There are 8 no. of External OB dumps in a total area of 27.31 ha. The total OB production for the whole cluster VII will be 378.86 Mm<sup>3</sup> for the life of cluster-VII. In post mining stage OB dump would be reclaimed with plantation.
- vi. The mode of coal transportation of 0.149 MTPA of coal i.e. 2.9% would be by road and 5.018 MTY i.e. 97.1% would be by rail-cum-conveyor mode. There are four existing railway sidings viz. BNR Railway siding, KDS siding, Burragarh Railway siding. Maximum subsidence in Dhansar UG is 6.83 maximum tensile 58.78mm/m and slope change 111.97mm/mt and for rest of 5 underground mines the Maximum subsidence is 0.63 mt and tensile strain over the mining area due to coal extraction in would be 2.84mm/m and slope change 5.41 mm/m respectively.
- vii. There are 31 fire spots in this cluster-VII the project involves R&R of 13605 no. The total PAFs, as per JAP are to be rehabilitated in phase-wise manner. The people will be rehabilitated in colonies which fall in Nagarikalan, Pokerbera, Kolipur, Pocherian and Darida, Tilatanr, Bamkunda, Jursabad, Khrya, Mahanpur, Damodarpur, Mouzas in an area of 123.441 ha at the cost of Rs 529.47crores.

- viii. The funds allocated for EMP is Rs 2.50/T of coal in case of UG mine and Rs 5.50/T of coal in case of OC mine. The budgetary provision for EMP (capital cost) is Rs 1098.30 lakhs . The CSR cost is Rs. 311.35 Lakhs per year@ Rs 5/T of coal. The Capital Cost Rs 366.809 Crores.
  - ix. The life of Dhansar UG is 34 years, Dhansar OC mine is 2 years, Kusunda OC is 27 years, Industry UG is closed, Alkusa UG is 30 years, Ena OCP is 20 years, South Jharia/Rajapur OCP is 20 years, life of Burragarh UG is 20 years, Simalbahal UG life is 20 years, Hurriladih UG life is 13 years, Bhutgoira UG life is 23, Kustore UG is closed, Vishwakarma OC is 20 years. (It will be operational after closure of Dhansar OC) is 11 years.
  - x. The Public Hearing for Cluster-VII group of 14 mines was held on 25.01.2012.
  - xi. It was informed that Cluster-VII falls in Dhanbad critically polluted area.
  - xii. The mines falling in Cluster VII, Vishwakarma OC approved by BCCL Board on 10.05.1997. Company has adopted “Corporate Environmental Policy” which has been approved by its Board of Directors on 21.04.2012. In cluster VII.
  - xiii. There is no forest land in cluster VII.
3. The entire Jharia Action Plan, which consists of all fire dousing projects /plans had been surveyed by DGMS, which has been designated as the monitoring and scrutinizing agency by Hon’ble Supreme Court of India under the WP (PIL) 387/1997 i.e. Haradhan Roy Vs UOI.
4. This is a violation case. As per the Office Memorandum dated 12.12.2012, issued by the Ministry of Environment and Forests, with regard to the consideration of proposals for ToR/Environment clearance/CRZ clearance involving violation of the Environment (Protection) Act, 1986/EIA notification, 20056/CRZ notification, 2011, the Environmental Clearance will be granted after the written commitment in the form of a formal resolution by the Board of Directors submitted to the MoEF to ensure that violations will not be repeated and the State Government concerned initiates credible action on the violation by invoking powers under Section 19 of the Environment (Protection) Act, 1986 for taking legal action under section 15 of the Act for the period for which the violation has taken place and evidence provided to the MoEF of the action taken. In this case, the Board’s resolution has been received. As regards credible action, Jharkhand State Pollution Control Board, has issued directions of closure of collieries of M/S Bharat Coking Coal Limited under section 31A & 33A of Air (Prevention and Control of Pollution) Act. 1981 & Water (Prevention and Control of Pollution) Act. 1974 respectively for operating without obtaining Environmental Clearance. M/s BCCL has filed a Writ Petition (No. 4944/11) challenging the Board’s directions of closure. The Jharkhand High Court has passed interim order on 25.08.2011 that “Till then, status quo, as on today, shall be maintained by the parties” and passed order on 18.01.2012 that “Until further orders, the interim order dated 25.08.2011 shall continue”. In the light of interim orders of the Jharkhand High Court, the State Pollution Control Board is seeking legal opinion for initiating legal action against the collieries of BCCL in the Court of Law in terms of the OM of the MoEF. The State Government has been asked to expedite taking legal opinion and taking action under intimation to the MoEF.
5. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in its 53<sup>rd</sup> meeting held on 16-17 July, 2012 for granting Environmental Clearance excluding Kustore UG and East Bhuggatdih. The Ministry of Environment & Forests has examined the application in accordance with the EIA Notification 2006 and under the provisions thereof, hereby accords environmental clearance for the above-mentioned **Cluster VII coalmines (14 mines of a total capacity of 6.227 MTPA and a peak production of 8.16 MTPA in an ML area of 2127.7 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, dist. Dhanbad,**

**Jharkhand** (excluding Kustore UG and East Bhuggatdih) under the provisions of the Environmental Impact Assessment Notification, 2006 and amendments thereto and Circulars issued thereon and subject to the compliance of the terms and conditions in addition to the general conditions as mentioned below:

**A. Specific Conditions:**

- (i) The maximum production shall not exceed beyond that for which environmental clearance has been granted for the 14 mine of cluster VII as below:

S.No	Mines in Cluster VII	Normative Prod. Capacity (MTPA)	Peak Prod. Capacity (MTPA)
1	Dhansar UG	0.372	0.484
2	Dhansar OC	0.800	1.040
3	Kusunda OC	2.00	2.600
4.	Industry UG	--	--
5	Alkusa UG	0.115	0.150
6.	Ena OC	0.170	0.221
7.	South Jharia/ Rajapur OC	1.300	1.690
8.	Burragarh UG	0.170	0.221
9.	Simalbahal UG	0.250	0.325
10.	Hurriladih UG	0.090	0.117
11.	Bhutgoira UG	0.360	0.468
12.	Kustore UG	--	--
13.	East Bhuggatdih	--	--
14.	Vishwakarma OC (it will be operational after closure of Dhansar OC)	0.700	0.910
	<b>Total</b>	<b>6.227</b>	<b>8.161</b>

- (ii) The measure identified in the environmental plan for cluster VII groups of mine and the conditions given in this environmental clearance letter shall be dovetailed to the implementation of the Jharia Action Plan.
- (iii) The proponent shall prepare time -series maps of the Jharia Coalfields through NRSA to monitor and prevent fire problems in the Jharia Coalfields by Isothermal mapping /imaging and monitoring temperatures of the coal seams (whether they are close to spontaneous ignition temperatures) and based on which, areas with potential fire problems shall be identified. Measures to prevent ingress of air (Ventilation) in such areas, to prevent restart fresh/spread fires in other areas including in mines of cluster VII shall be undertaken.
- (iv) Underground mining should be taken up after completion of reclamation of Opencast mine area after 13 years.
- (v) No mining shall be undertaken where underground fires continue. Measure shall be taken to prevent/ check such fire including in old OB dump areas where the fire could start due to presence of coal /shale with sufficient carbon content.

- (vi) The rejects of washeries in Cluster –VII should be send to FBC based plant.
- (vii) There shall be no external OB dumps. OB produce from the whole cluster will be 378.86 Mm3. OB from 5 OCP mine shall be backfilled. At the end of the mining there shall be no void and the entire mined out area shall be re-vegetated. Areas where opencast mining was carried out and completed shall be reclaimed immediately thereafter.
- (viii) A detailed calendar plan of production with plan for OB dumping and backfilling (for OC mines) and reclamation and final mine closure plan for each mine of cluster-VII shall be drawn up and implemented.
- (ix) The void shall be converted into a water reservoir of a maximum depth of 15-20 m and shall be gently sloped and the upper benches of the reservoir shall be stabilised with plantation and the periphery of the reservoir fenced. The abandoned pits and voids should be backfilled with OB and biologically reclaimed with plantation and or may be used for pisciculture
- (x) Mining shall be carried out as per statuette from the streams/nalas flowing within the lease and maintaining a safe distance from the Nalas flowing along the lease boundary. A safety barrier of a minimum 60m width shall be maintained along the nalas/water bodies. The small water bodies in OC shall be protected to the extent feasible and the embankment proposed along water body shall be strengthened with stone pitching.
- (xi) Active OB dumps near water bodies and rivers should be rehandled for backfilling abandoned mine voids. However, those which have been biologically reclaimed need not be disturbed.
- (xii) Thick green belt shall be developed along undisturbed areas, mine boundary and in mine reclamation. During post mining stage, a total of 794.09 ha area would be reclaimed. The total additional area under plantation would be 1165.67 ha (90.78 ha abandoned quarry area, 516 ha active quarry area, 27.31 OB dump outside quarry area, 38.55 ha service building /mine infrastructure area /coal dump etc, 395 ha green belt around OCP, 98.5 ha barren area), by planting 2914150 plants at a total cost of Rs 642.20 lakhs.
- (xiii) The road should be provided with avenue plantation on both side as trees act as sink of carbon and other pollutant.
- (xiv) Specific mitigative measures identified for the Jharia Coalfields in the Environmental Action Plan prepared for Dhanbad as a critically polluted are and relevant for Cluster VII shall be implemented.
- (xv) The locations of monitoring stations in the Jharia Coalfields should be finalized in consultation with the Jharkhand State Pollution Control Board. The Committee stated that smoke/dust emission vary from source to source (fuel wood, coal, flyash from TPPs, silica from natural dust, etc) and a Source Apportionment Study should be got carried out for the entire Jharia Coalfields. Mineralogical composition study should be undertaken on the composition of the suspended particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) in Jharia Coalfields and also quantified. These studies would help ascertain source and extent of the air pollution, based on which appropriate mitigative measures could be taken.
- (xvi) No groundwater shall be used for the mining activities. Additional water required, if any, shall be met from mine water or by recycling/reuse of the water from the existing activities and from rainwater harvesting measures. The project authorities shall meet

water requirement of nearby village(s) in case the village wells go dry to dewatering of mine.

- (xvii) Regular monitoring of groundwater level and quality of the study area shall be carried out by establishing a network of existing wells and construction of new peizometers. 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 including Arsenic and Fluoride during the month of May. Data thus collected shall be submitted to the Ministry of Environment & Forest and to the Central Pollution Control Board/SPCB quarterly within one month of monitoring. Rainwater harvesting measures shall be undertaken in case monitoring of water table indicates a declining trend.
- (xviii) Mine discharge water shall be treated to meet standards prescribed standards before discharge into natural water courses/agriculture. The quality of the water discharged shall be monitored at the outlet points and proper records maintained thereof and uploaded regularly on the company website.
- (xix) ETP shall also be provided for workshop, and CHP, if any. Effluents shall be treated to conform to prescribed standards in case discharge into the natural water course
- (xx) Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material.
- (xxi) Sufficient coal pillars shall be left unextracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.
- (xxii) High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
- (xxiii) Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.
- (xxiv) Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.
- (xxv) No depillaring operation shall be carried out below the township/colony.
- (xxvi) The Transportation Plan for conveyor-cum-rail for Cluster-VII should be dovetailed with Jharia Action Plan. Road transportation of coal during Phase-I should be by mechanically covered trucks, which should be introduced at the earliest. The Plan for conveyor-cum-rail for Cluster-VII should be dovetailed with Jharia Action Plan. The road transportation of coal during phase-I should be by mechanically covered trucks.
- (xxvii) A study should be initiated to analyze extent of reduction in pollution load every year by reducing road transport.
- (xxviii) R&R of 13605 nos of PAF's involved. They should be rehabilitated at cost of Rs 529.47 Crores as per the approved Jharia Action Plan.
- (xxix) A detailed CSR Action Plan shall be prepared for Cluster VII group of mines. Specific activities shall be identified for CSR the budget of Rs. 311.35 Lakhs per year @ Rs 5/T of



coal as recurring expenditure. The 143 ha of area within Cluster VII ML existing as waste land and not being acquired shall be put to productive use under CSR and developed with fruit bearing and other useful species for the local communities. In addition to afforesting 794.09 ha of area at the post-mining stage, 135.5 ha waste land /barren land within Cluster VII ML shall be rehabilitated/reclaimed as forest/agricultural land under CSR Plan in consultation with local communities. Third party evaluation shall be got carried out regularly for the proper implementation of activities undertaken in the project area under CSR. Issue raised in the Public Hearing shall also be integrated with activities being taken up under CSR. The details of CSR undertaken along with budgetary provisions for the village-wise various activities and expenditure thereon shall be uploaded on the company website every year. The company must give priority to capacity building both within the company and to the local youth, who are motivated to carry out the work in future.

- (xxx) For monitoring land use pattern and for post mining land use, a time series of land use 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 Bhubaneswar.
- (xxxi) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests five years before mine closure for approval. Habitat Restoration Plan of the mine area shall be carried out using a mix of native species found in the original ecosystem, which were conserved in-situ and ex-situ in an identified area within the lease for reintroduction in the mine during mine reclamation and at the post mining stage for habitat restoration.
- (xxxii) 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 for implementing environment policy and socio-economic issues and the capacity building required in this regard. .
- (xxxiii) Implementation of final mine closure plan for Cluster VII, subject to obtaining prior approval of the DGMS in regard to mine safety issues
- (xxxiv) 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. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.
- (iv) Data on ambient air quality (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.
- (v) 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.
- (vi) 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.
- (vii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
- (viii) 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 EPA Rules, 1986.
- (ix) 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.
- (x) 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. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.
- (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 Bhubaneswar.
- (xiii) 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>.
- (xiv) A copy of the environmental clearance letter shall be marked to concern Panchayat/ZilaParishad, Municipal corporation or Urban local body and local NGO, if any, from whom any suggestion /representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.
- (xv) A copy of the environmental clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar's Office for 30 days.
- (xvi) The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise

- and soil) and critical pollutant such as PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.
- (xvii) The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB.
  - (xviii) The Regional Office of this Ministry located at Bhubaneswar 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.
  - (xix) The Environmental statement for each financial year ending 31 March in For –V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF by E-mail
6. The Ministry or any other Competent Authority may stipulate any further condition(s) for environmental protection.
  7. 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.
  8. 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.
  9. The Environmental Clearance is subject to the outcome of the Writ Petition filed by M/S Bharat Coking Coal Limited (BCCL) in response to the closure orders issued by the Jharkhand State Pollution Control Board which is pending in the Jharkhand High Court.

(Dr. Manoranjan Hota)  
Director

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrashekarapur, Bhubaneswar – 751023.
4. Chairman, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), H.E.C., Dhurwa, Ranchi – 834004.
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. District Collector, dist. Dhanbad Government of Jharkhand.
8. Monitoring File      9.      Guard File      10.      Record File
- 9.

(Dr. Manoranjan Hota)  
Director