

No. J-11015/185/2010-IA.II (M)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan,  
CGO Complex, Lodhi Road  
New Delhi-110510.

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

To

The General Manager (E&F)  
**M/s Bharat Coking Coal Ltd.,**  
Koyala Bhawan,  
Dhnabad-826005  
Jharkhand

**Sub. : Cluster XVI - coalmines (Dahibari-Basantimata OCP, Basantimata under Ground Mine, New Laikdih OCP (including Dahibari Coal Washery), Laikdih Deep UG, Chanch UG) (normative 1.51 MTPA and 1.963 MTPA peak in a combined ML area of 1964.21 ha) and Dahibari washery of 1.6 MTPA in the area of 12 ha. of M/s Bharat Coking Coal Ltd., in dist. Dhanbad, Jharkhand (EC based on TOR granted on 28.05.2010)- Environment Clearance –reg.**

Sir,

This is with reference to letter no.43011/15/2010-CPAM dated 07<sup>th</sup> April, 2010 along with the application for Terms of Reference (TOR) and this Ministry's letter dated 28.05.2010 granting TOR. Reference is also invited to the letter No. BCCL/GM (Env.)/EMP F-2012/256 dated 30.03.2012, 12.05.2012, 04.07.2012 and 22.08.2012 for environmental clearance on the above-mentioned subject.

2. The Ministry of Environment & Forests has considered the application. The proponent has informed that:

- i. The Cluster XVI is a group of 5 Mines (two operating mines namely, Dahibari -Basantimata OC and Basantimata colliery UG, and three mines closed for production namely New Laikdih OCP, Laikdih Deep UG and Chanch UG) and a proposed coal washery within the ML of New Laikdih OCP. Of the above mines, 3 mines are UG mines namely Basantimata UG, Laikdih UG and Chanch UG and two mines are opencast mines namely Dahibari-Basantimata OC and New Laikdih Deep OC. As per the records submitted by the proponent, the location of coal field is in the western part of the Raniganj Coalfield in Dhanbad district of Jharkhand. The registered address of the coalfield has been mentioned for West Bengal.
- ii. This proposal does not involve any increase in lease hold area, change in technology or change in product mix in the mines.
- iii. The area has undulating topography. The mines in the cluster have a combined ML area of 1964.21 ha and production capacity of 1.51 MTPA (normative) and 1.963 MTPA (peak) as given below:

MINES IN CLUSTER XVI							
Sl.no	Name of Mine		Status	Prod. Capacity (MTPA)		ML (ha)	Life of Mine (years)
				Normative	Peak		
1	Dahibari Basantimata OCP	OCP	Operating	1.30	1.69	385.68	16
2	Basantimata UG	UGP	Operating	0.21	0.273	417.00	24
3	New Laikdih OCP (Includes prop. Dahibari Washery)	OCP	Closed for production	0.00	0.00	305.10	Closed
4	Laikdih Deep UG	UGP	Closed for production	0.00	0.00	281.00	Closed
5	Chanch UG	UGP	Closed for production	0.00	0.00	575.43	Closed
<b>Total</b>				<b>1.51</b>	<b>1.963</b>	<b>1964.21</b>	
	Dahibari washery			1.6 MTPA		12 (Within New Laikdih lease hold)	

iv. The drainage system in the area is controlled by Barakar river which is a major tributary of the master drainage i.e. Damodar river. The project area is mainly drained by Khudia river and it is flowing along the north-east boundary of the block. Damodar river and Barakar River are the master drainage of the area.

v. The major project parameters of the mines of cluster-XVI are given below:

Parameters	Dahibari Basantimata	Basantimata UG	New Laikdih OCP (including proposed Dahibari Washery)	Laikdih Deep UG	Chanch UG	Total
Lease Area in Ha	385.68	417.00	305.10	281.00	575.43	1964.21
Production in 1993-94 (MTPA)	0.12	0.126	0.298	0.053	0.00	0.597
Production in 2010-11 (MTPA)	0.857	0.182	0.00	0.00	0.00	1.039
Proposed	1.69	0.273	0.00	0.00	0.00	1.963

peak Production (MTPA)						
Method of Mining	Shovel & Dumper	Bord & Pillar	-	-	-	
Life	16 years	24 years	Closed	Closed	Closed	
Manpower	960	1448	-	-	-	
Depth (m )	130	150	-	-	-	
Seam gradient	1 in 3 to 1 in 4	1 in 4 to 1 in 6	-	-	-	
Mineable Reserve (mt)	18.23	5.052	-	-	-	
Grade of Coal	D to F	B to G	-	-	-	
Seams to be worked	Palasia, Gopinathpur, Brindabanpur, Kalimati	Palasia, Gopinathpur, Brindabanpur Kalimati	-	-	-	
Cost of Production- Rs/te-	628.66	2088.35	-	-	-	

Vi The details of coal production in Cluster-XVI during the last 5 years were presented as given below:

COAL PRODUCTION DURING LAST FIVE YEARS (MT)				
Year	Name of Mine			Total Production (MT)
	Dahibari OCP	Basantimata	Basantimat UG	
2006-07		1.06	0.177	1.23
2007-08		1.29	0.171	1.46
2008-09		1.24	0.135	1.38
2009-10		1.14	0.183	1.32
2010-11		0.857	0.182	1.04

**PLAN FOR RECLAMATION OF CLUSTER XVI:**

PLAN FOR RECLAMATION OF CLUSTER XVI				
S.N.	Name of Mine	ML Area (ha)	Closure cost (Rs in Lakhs)	
			Without Escalation	With Escalation

1.	Dahibari Basantimata OCP	385.68	2314.08	2587.141
2.	Basantimat UG	417	417.00	466.206
3.	New Laikdih OCP (includes Proposed Dahibari Washery)	305.10	1830.6	2046.61
4.	Laikdih Deep UG	281	281.00	314.158
5.	Chanch UG	575.43	575.43	643.3307
6.	Dahibari Washery	12.00	12	13.416
	<b>Total</b>	<b>1976.21</b>	<b>5430.11</b>	<b>6070.862</b>

Vii The details of post-mining land use of Cluster-XVI are given below:

Sl.No.	Type of land use		Present mining land use (in Ha)	Post-mining land use (in Ha)
1	Running Quarry			
		Backfilled	3.5	0
		Not Backfilled	18.79	0
2	Abandoned Quarry	Backfilled	9.08	0
		Not Backfilled	14.88	0
3	External OB dump		72.17	0
4	Service building/ Mine Infrastructure		178.64	167.356
5	Coal dump		1.59	0
6	Road and rail		7.94	8.4
7	Agricultural Land		306.39	303.62
8	Forest Land		0	0
9	Plantation		14	242.09
10	Water Body		261.59	278.59
11	Barren Land		1075.61	965.12
	<b>Total</b>		<b>1964.21</b>	<b>1964.21</b>

Viii A Plan for reclamation of the 3 closed mines has been prepared, whereby all the abandoned and existing mines pits would be filled up, reclaimed and ecologically restored. Of the total 38 Mm<sup>3</sup> OB would be generated during the operation of Dahibari-Basantimata Quarry, an estimated 26.50 Mm<sup>3</sup> would be backfilled and the balance 11.50 Mm<sup>3</sup> of OB would be stored in an external OB dump and technically and biologically reclaimed. The mine void would be used for as water reservoir and used for pisciculture. The maximum depth of final void would be 30m.

ix. The coal would be dispatched to consumers through the existing railway siding of old CHP of Dahibari colliery. Rapid Loading System (3600 tph) for wagon loading has been proposed.

x. A total area of 242.00 ha would be reclaimed and afforested.. Eco-restoration for all clusters of BCCL mines 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 as per road map prepared by Forest Research Institute, Dehradun.

<b>Details of Rehabilitation in Cluster- XVI</b>		
<b>S.N.</b>	<b>Parameter</b>	<b>Details</b>
1.	Total Voids	28.00 Mm <sup>3</sup>
2.	Total OB available	37.92 Mm <sup>3</sup>
3.	Total Unstable Sites	13 no.
4.	Total Affected Areas	451335 m <sup>2</sup>
5.	No. of Houses to be rehabilitated	1193 no. as per JAP
6.	Land for Resettlement	1.79 ha (BCCL land) 24.7 ha (Non-BCCL land)
7.	Total cost of fire dealing	NIL
8.	Total resettlement Cost	<b>Rs 10171.88 lakhs</b>

<b>Major Issues of Cluster-XVI</b>		
<b>S.N.</b>	<b>Major Env. Issues</b>	<b>Mitigation measures and Benefit</b>
1.	Voids (28 Mm <sup>3</sup> )	The voids will be filled with OB and at the end of mine life only 278.59 Ha will remain as water body.
2.	Ext. OB Dumps (11.43 Mm <sup>3</sup> )	External dumps A, B and C in the east and south of the quarry on non coal bearing area will be reclaimed.
3.	Unstable area 13 site with 0.45 Sq km consisting of 1193 PAF	Rehabilitation of affected families at the cost of Rs 10171.88 lakhs.
4.	Reclamation/Mine closure	Additional plantation in 242.00 ha land at the cost of Rs 2448.50 lakhs. (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)
5.	CSR	Rs 75.55 Lakhs per year@ Rs 5/T of coal

xi. Total water discharge of the mines of the cluster is 3380 cum/day. The peak water requirement of cluster-XVI would be 2620 m<sup>3</sup>/day (650 m<sup>3</sup>/day for mining operations and 1970 m<sup>3</sup>/day for domestic). It was informed that 17.00 ha of the void will be backfilled upto a depth of 15-20m for creation of water body and the remaining void will be backfilled upto the ground level. Water level in the cluster is in the range of 1.50-8.25 (pre-monsoon) and 2.10 m bgl – 8.98 m bgl (post-monsoon) in core area . The existing natural water body is 261.59 ha area . In the post mining stage an additional

17 ha of water body will be created with 15-20 mt and would be used for community /Pisciculture. At the end mining there will be no void.

- xii. A total area of 242.00 ha would be reclaimed and afforested. The Action Plan has also been prepared for Ecological Restoration OB dumps and voids. It was informed that the BCCL has formulated its Corporate Environment Policy. R&R involved. Out of 595 unstable sites identified in the Master Plan, 13 sites consisting of 1193 no. PAF's are affected in this cluster. The rehabilitation of affected families would be at the cost of Rs 10171.88 lakhs. Non BCCL families will be re-settled & rehabilitated in an area of 24.7 h.
- xiii. CSR OF Rs 75.55 lakhs/year at the rate of Rs 5/ton of coal production. Cost for Environment Management Plan is Rs 10591.88 lakhs (capital) and Rs 451.55 lakhs as revenue costs. Mine closure cost would be Rs 6070.86 lakhs initially and from 7<sup>th</sup> year it would be Rs 15.59 lakhs.
- xiv. Public Hearing was held on 21.01.2012.
- xv. All the mines of the clusters are pre-nationalization mines, therefore, no mining plan is existing. The Company has adopted "Corporate Environmental Policy" which has been approved by its Board of Directors on 21.04.2012.
- xvi. Proposed Dahibari Washery - Dahibari (NLW) Coal Washery is proposed to be located in the lease hold of abandoned New Laikdih colliery in the vicinity of Dahibari- Basantimata OCP. The land identified for the washery is abandoned area of old CHP & workshop of Dahibari colliery. The land is non-agricultural having no habitation and no vegetation. The land is already under possession of BCCL under CBA Act. The raw coal shall be received by road from adjacent Dahibari-Basantimata OCP about 5kms away. The washed coal is proposed to be transported by conveyor belt to adjoining Railway siding towards north and wagon loading of washed coal is proposed through rapid loading system (3600tpd) consisting of hopper & surge bunker. The washery project is proposed to be established on "Build-Operate & Maintain" basis. The life of the project is 18 yrs, for computation of economics.

3. It was further stated that the Jharia Action Plan, which consists of all fire dousing projects/plans had been surveyed by DGMS and DGMS is also the monitoring and scrutinizing agency constituted by the Hon'ble Supreme Court of India under the WP(PIL) 387/1997 i.e. Haradhan Roy Vs UOI. It was clarified that any new scheme of fire dousing would need the approval of DGMS.

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, 2006/ 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. 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 XVI - coalmines (Dahibari-Basantimata OCP, Basantimata under Ground Mine, New Laikdih OCP (including Dahibari Coal Washery), Laikdih Deep UG, Chanch UG) (normative 1.51 MTPA and 1.963 MTPA peak in a combined ML area of 1964.21 ha) and Dahibari washery of 1.6 MTPA in the area of 12 ha. of M/s Bharat Coking Coal Ltd., in dist. Dhanbad, Jharkhand 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 from the opencast and underground section in the cluster shall not exceed beyond that for which environmental clearance has been granted for the cluster XVI as below:

Sl.no	Name of Mine		MINES IN CLUSTER XVI				
			Status	Prod. capacity (MTPA)		ML (ha)	Life of Mine (years)
				Normative	Peak		
1	Dahibari OCP	OCP	Operating	1.30	1.69	385.68	16
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	<b>Total</b>			<b>1.51</b>	<b>1.963</b>	<b>1964.21</b>	
	Dahibari washery			1.6 MTPA		12 (Within New Laikdih lease hold)	

- (ii) All the void /water bodies should be backfilled upto ground level and no OB dump at the end of mining.
- (iii) Extensive plantation should be provided on either side of River;
- (iv) Impact of mining on ground water of the area (Impact Zone) should be provided;
- (v) A Garland drain should be provided

- (vi) Excess water from mine after treatment should be supplied to the villagers;
- (vii) Rejects of washery along with dry carbon slurry should be utilized in power plant and other recognized vendors;
- (viii) A time schedule for filling of existing and abandoned quarries be done;
- (ix) The measure identified in the environmental plan for cluster X groups of mine and the conditions given in this environmental clearance letter shall be dovetailed to the implementation of the Jharia Action Plan.
- (x) As there is no fire in Cluster XVI but the measure should be adopted by proponent to control spread of neighbouring fire to this Cluster XVI. 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 XIV shall be undertaken.
- (xi) Underground mining should be taken up after completion of reclamation of Opencast mine area after 2 years.
- (xii) No mining shall be undertaken where underground fires continue. Measure shall be taken to prevent/ check such fire including in old OB dump
- (xiii) A part of cluster XVI is under Barakar River and Damodar River. It was clarified that although the mine is underground, there is no coal underneath River Damodar, which would be mined. The Committee desired that the data of bore wells near River Damodar require to be monitored for permeability and seepage of water of River Damodar.
- (xiv) The rejects of washeries in Cluster -XVI should be send to FBC based plant.
- (xv) There shall be no external OB dumps. OB produce from the whole cluster will be 29.01 Mm<sup>3</sup>. OB from One Patch 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.
- (xvi) 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- XVI shall be drawn up and implemented.
- (xvii) The void in 5 ha area shall be converted into a water reservoir of a maximum depth of 15-20 m in post mining stage 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
- (xviii) 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.



- (xix) 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.
- (xx) Thick green belt shall be developed along undisturbed areas, mine boundary and in mine reclamation. During post mining stage, a total of 242.09ha area would be reclaimed by planting native species in consultation with the local DFO/Agriculture Department/institution with the relevant discipline. The density of the trees shall be around 2500 plants per ha.
- (xxi) The road should be provided with avenue plantation on both side as trees act as sink of carbon and other pollutant.
- (xxii) 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 -XVI shall be implemented.
- (xxiii) 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.
- (xxiv) 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.
- (xxv) 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.
- (xxvi) 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.
- (xxvii) ETP shall also be provided for workshop, and CHP, if any. Effluents shall be treated to confirm to prescribed standards in case discharge into the natural water course.
- (xxviii) 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.

- (xxix) 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.
- (xxx) High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
- (xxxi) Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.
- (xxxii) Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.
- (xxxiii) No depillaring operation shall be carried out below the township/colony.
- (xxxiv) The Transportation Plan for conveyor-cum-rail for Cluster- XVI 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- XIV should be dovetailed with Jharia Action Plan. The road transportation of coal during phase-I should be by mechanically covered trucks.
- (xxxv) A study should be initiated to analyze extent of reduction in pollution load every year by reducing road transport.
- (xxxvi) R&R of 1193 nos of PAF's involved. They should be rehabilitated at cost of Rs 10171.88 lakhs as per the approved Jharia Action Plan.
- (xxxvii) Details of transportation, CSR, R&R and implementation of environmental action plan for each of the 17 clusters should be brought out in a booklet for and submitted to Ministry.
- (xxxviii) A detailed CSR Action Plan shall be prepared for Cluster XVI group of mines. Specific activities shall be identified for CSR of Rs 20.25/annum @ of Rs 5/ton of coal production. as recurring expenditure. The 242.09ha of area within Cluster XVI 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. 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.
- (xxxix) 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.

- (xl) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests five year 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.
- (xli) 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.
- (xlii) Implementation of final mine closure plan for Cluster XVI, subject to obtaining prior approval of the DGMS in regard to mine safety issues
- (xliii) 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 shall also 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

(Dr. Manoranjan Hota)  
Director