



**BHARAT COKING COAL LTD.**  
A Mini Ratna Company  
(A Subsidiary of Coal India Ltd.)  
REGD. Office: Koyla Bhawan, Koyla Nagar, Dhanbad-826005  
CIN No. U10101JH1972GO1000918  
**OFFICE OF THE GENERAL MANAGER**  
**BARORA AREA**

Ref No. GM/AR-1/SURVEY/ 170 /2019

Dated: - 30/11/19

To  
The Director  
Ministry of Environment, Forest & CC  
Regional Office (ECZ), Bungalow No.-2  
Shyamali Colony  
Ranchi- 834002

**Sub:** Six monthly reports on implementation of Environmental measures for the period from April' 2019 to Sept '2019 in respect of Cluster -XV groups of mines.

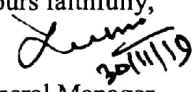
**Ref:-EC Order No. J-11015/100/2011-IA.II (M)**

Dear Sir,

Kindly find enclosed herewith the six monthly report on implementation of Environmental measures for the period from April' 2019 to Sept '2019 in respect of Cluster -XV groups of mines.

Hope you will find the same in order.

Yours faithfully,

  
General Manager  
Barora Area

  
30/11/19

Encl: as above

**C.C to**

1. The Director, 1A monitoring cell  
Paryavaran Bhawan CGO Complex, New Delhi-110003
2. Regional office, JSPCB, Housing colony, Dhanbad
3. Dy. GM (Env.) BCCL Koyla Bhawan, Dhanbad.
4. Nodal Officer (Env.), Barora Area.
5. Nodal Officer (Env.), Govindpur Area.

# ENVIRONMENTAL CLEARANCE COMPLIANCE OF CLUSTER-XV

**(GRANTED VIDE J-11015/100/2011-IA.II (M) Dated 16.12.2013)**

**April' 2019 to Sept '2019**

## Action Plan for compliance of EC conditions

S. No.	A. Specific Conditions by MoEFCC:					Compliance																																				
i	<b>The maximum production in the cluster shall not exceed beyond that for which environmental clearance has been granted for Cluster –XV as per given below:</b> <table><tr><th rowspan="2">Sl. No.</th><th rowspan="2">Name of Mines</th><th colspan="2">Production capacity (MTPY)</th><th rowspan="2">Leasehold area (Ha.)</th></tr><tr><th>Normative</th><th>Peak</th></tr><tr><td>1</td><td>Kharkharee Coll.</td><td>0.092</td><td>0.12</td><td>584.00</td></tr><tr><td>2</td><td>Madhuband coll.</td><td>0.113</td><td>0.147</td><td>393.77</td></tr><tr><td>3</td><td>Phularitand coll.</td><td>0.120</td><td>0.156</td><td>340.88</td></tr><tr><td>4</td><td>Dharmaband hcoll(Closed for production)</td><td>0</td><td>0</td><td>377.90</td></tr><tr><td></td><td>Total</td><td>0.325</td><td>0.423</td><td>1696.55</td></tr></table>					Sl. No.	Name of Mines	Production capacity (MTPY)		Leasehold area (Ha.)	Normative	Peak	1	Kharkharee Coll.	0.092	0.12	584.00	2	Madhuband coll.	0.113	0.147	393.77	3	Phularitand coll.	0.120	0.156	340.88	4	Dharmaband hcoll(Closed for production)	0	0	377.90		Total	0.325	0.423	1696.55	<p>The production from the cluster is within the limit for which Environmental clearance has been granted. Madhuband colliery and Phularitand colliery are closed for production. Kharkharee colliery having leasehold area 584.00 Ha is under mining operation. Details of production from Kharkharee Colliery is given below:</p> <table><tr><td>FY</td><td>Production (Te)</td></tr><tr><td>2018-19</td><td>15655</td></tr></table>	FY	Production (Te)	2018-19	15655
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ii	The proponent shall prepare a contingency plan for subsidence.					It is being complied as per the guidelines of DGMS.																																				
iii	Keeping in view the pattern of the subsidence in the area, no depillaring should be carried out until the rehabilitation of the affected families and shifting of infrastructure.					It shall be complied. No depillaring is being carried out at present.																																				
iv	The channels adjoining the ML area leading to Jamunia river should not be disturbed and be regularly desilted.					It is being complied.																																				
v	The quality of the Jamunia river water should be continuously monitored and in order to prevent silting, a series of check dams should be constructed using boulders. This will help in recharging the ground water.					It is being complied.																																				
vi	The coal from the mines will be transported by mechanically covered trucks within two months.					Conversion of existing truck into mechanically covered trucks in a phased manner has been taken up. Presently, transportation is being done by covering vehicle with tarpaulin.																																				
vii	In underground mining there is presence of organic gases. These gases are volatile in nature. Due to transmission of air, fire takes place. The routine mining engineering will not serve the purpose. Therefore, proper studies are carried out to understand underground seams and how these fire areas could be sealed from further spreading.					All the statutory provisions under mines act 1952 and CMR 1957 along with statutes constituted under Mines act are fully complied to prevent any occurrence of fire. Regular monitoring and inspection is done by DGMS.																																				

viii	<b>Cumulative impact of fire and gases for all the clusters of coal mines in Jharia Coal field is carried out.</b>	It is being complied. Presently Master Plan approved by Govt. of India is under implementation for this purpose. Fire control in Jharia and its periphery is being done with the recommendation received from CIMFR. An international expression of interest had been invited by BCCL and two bidders submitted their proposals, work shall be awarded as per the recommendation of tender committee.
ix	<b>National Remote Sensing Agency (NRSA) should be contacted for thermal imaging techniques which are being utilized for assessing the extent of impact of underground of fire. BCCL should consider for an MOU with NRSA for short and long term studies so as to obtain detailed information on Satellite imagery, thermal imagery, subsidence prediction and surface features of the mining area.</b>	The latest NRSA map is being submitted to RO, Ranchi & enclosed herewith. Action is being taken as specified in EC and as per Jharia Master Plan. (Soft copy of NRSA Report attached as Annexure I)
x	<b>The Project proponent should monitor the water quality of the Jamunia river as per the standards prescribed by the JSPCB/CPCB to maintain the required BOD in the river water.</b>	Work of monitoring ambient environment including water quality of the Jamunia river is being done by CMPDIL, Ranchi. (Soft copy of monitoring report is enclosed as Annexure II)
xi	<b>The nullah as adjacent to the river should not be disturbed.</b>	It is being complied.
xii	<b>The open cast quarries of the abandoned mines should be backfilled to the ground level and restored with native species.</b>	It is being complied.
xiii	<b>All coal from the smaller U/G mines should be transported by high capacity and mechanically covered trucks/tippers.</b>	Coal is being transported in tarpaulin covered trucks.
xiv	<b>Green belts shall be developed on both sides of the roads.</b>	Due to absence of permanent roads in the coalfield, avenue plantation couldn't be done but trees were planted near permanent structures to minimize the pollution.
XV	<b>Action plan for quenching of fires and rehabilitation along with the details of master plan be submitted to MOEF for monitoring purpose.</b>	It is being complied. The approved master plan is uploaded on BCCL website ( <a href="http://www.bccl.gov.in/PDFs/MPLANBCCL.pdf">www.bccl.gov.in/PDFs/MPLANBCCL.pdf</a> ) and regular monthly progress report is being sent to ministry.
XV I	<b>Presently coal of Munidih washery from other mines of the cluster is taking place through NH. An alternate route for coal transportation may be explored.</b>	Jharia Coalfield is a densely and highly populated region. Alternative route will further add pollution and rehabilitation problems. It may be explored only after the shifting of population, living in coalfield region.
XV II	<b>For understanding the composition of emissions from coal mine fires, BCCL may initiate action as proposed in the visit report of the EAC to Dhanbad.</b>	<b>Source Apportionment Study:</b> Work Order had already been issued to NEERI Nagpur on 12.05.2018. And work has been started in September 2018. Field data collection for Summer season has been done, winter data collection is in process. The progress report sent by NEERI is attached as Annexure III
XV III	<b>The approved mining plan is submitted to the MOEF.</b>	Most of the BCCL mines are taken over mines from the erstwhile private owners who were operating mines without mine plans at the time of nationalization and now are being operated as amalgamated collieries/quarries as per the guide lines of DGMS.

XI X	The measure to identify in the Environmental Plan for Cluster- XV groups of mine and the conditions given in this environmental clearance letter shall be dovetailed to the implementation of the Jharia Action Plan.	It is being complied.
XX	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 XV shall be undertaken. Expertise available internationally could also be utilized for control of fire in Jharia Coalfields and for their reclamation and to further minimize time for fire and subsidence control. Isothermal mapping using thermal imaging has been got done by NRSA. Measures would be taken prevent ingress of air (Ventilation) in such areas, which may restart fresh fires.	<p>The latest NRSA map is being submitted to RO, Ranchi &amp; enclosed herewith. (Soft copy of NRSA Report attached as Annexure I Enclosed)</p> <p>Action is being taken as specified in EC and as per Jharia Master Plan. Further fire patches are under operation to dig out the fiery coal and combustible materials to save the coal from burning and to stop further spread of the fire.</p>
XX I	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.	It is being complied.
XX II	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.	It is being complied. Mining is being carried out as per the guidelines of DGMS.
XX III	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.	It is being complied. Mining is being carried out as per the guidelines of DGMS.
XX IV	Total afforestation plan shall be implemented covering an area of 621.28 Ha. (Additional) at the end of mining which will include, Green belt over an area of 229.12 Ha., density of tree plantation 2500/ Ha. Of plants.	Being complied.
XX V	Details of transportation, CSR,R&R and implementation of environmental action plan for the clusters XV should be brought out in a booklet from within a year and regularly updated.	<p>It is being followed. CSR dept has been established at area level. This year BCCL has constructed over 3500 toilets under “SwacchBharatAbhiyan”.</p> <p>(Soft copy enclosed of CSR Booklet Enclosed as Annexure IV)</p>
XX VI	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- XV shall be implemented	<p>Dhanbad Action Plan is being implemented. The salient actions of this area:</p> <ol style="list-style-type: none"> <li>1. Covered transportation of Coal.</li> <li>2. Water sprinkling.</li> <li>3. Plantation.</li> <li>4. Utilization of surplus mine water</li> </ol>
XX VII	The locations of monitoring stations in the Jharia coalfield should be finalized in consultation with Jharkhand State Pollution Control Board. Committee stated that smoke/dust emission vary from source to	<p>Establishment of ambient environment quality monitoring stations has been finalized with the consultation of Jharkhand State Pollution Control Board.</p> <p>The work of monitoring of ambient environment was done by</p>

	<p>source (fuel wood, coal, fly ash 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.</p>	<p>Central Institute of Mining &amp; Fuel Research (CIMFR), Dhanbad which is a CSIR laboratory recognized under the EP Rules. Now the monitoring work has been taken up by CMPDIL, Ranchi.</p> <p><b>Source Apportionment Study :</b> Work Order had already been issued to NEERI Nagpur on 12.05.2018. And work has been started in September 2018. Field data collection for Summer season has been done, winter data collection is in process.</p> <p>The progress report sent by NEERI is attached as Annexure III</p>
XV III	<p>The proponent will continue the existing Road-Rail transport network system in view of the implementation of the Master Plan (For 10 years) and another 5 Years gestation period after the completion of Master Plan for consolidation of the backfilled dug out fire areas and unstable areas is required. All mitigation measures (like covered trucks, green belting on either sides of the roads, enhanced water sprinkling, strengthening and maintaining the roads etc.) shall be adopted up to 15 years (phase-I) with the existing Road- Rail transport system. In phase –II, BCCL shall implement conveyor-cum-rail transport to avoid movement of trucks within the cluster for coal transportation in phase-II which shall start after 15 years. Transportation of coal shall be by Rail and Conveyor belt, minimizing the existing road transport system in all the mines of the cluster and shall continue after 15 years. Loading of coal by pay loaders shall be discontinued. Adequate number suitably designed off-take points shall be provided.</p>	<p>At present we are exploring the technology to cover existing trucks mechanically by local technicians and no OEM is available for covered trucks in Indian market until the coal production is being done by tarpaulin covered trucks.</p>
XX IX	<p>1537 nos. of PAFs should be rehabilitated at cost of Rs.140.03 crores as per the approved Jharia Action Plan.</p>	<p>It is being complied as per approved Jharia Action Plan.</p>
XX X	<p>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.</p>	<p>It shall be complied .No depillaring is being carried out at present.</p>
XX XI	<p>Coal Extraction shall also be optimized in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No depillaring &amp; coal extraction should be carried out below habitation, H.T Lines &amp; beneath road, water bodies.</p>	<p>It is being complied.</p>
XX XII	<p>Subsidence shall be monitored closely and if subsidence is found exceeding the permitted limits, then the land owners shall be adequately compensated with mutual agreement with the land owners.</p>	<p>No depillaring is being carried out at present.</p>
XX XII I	<p>3-tiers plantation should be developed 2KM stretch of road from the mine using native species.</p>	<p>It is being complied.</p>
XX XI V	<p>Water sprinkling system shall be provided to check fugitive emission from loading operations, conveyor system, haulage roads, transfer points, etc. Major approach roads shall be black topped and properly</p>	<p>It is being complied.</p>

	<b>maintained.</b>	
XX XV	<b>A progressive afforestation plan shall be prepared and implemented over the mine lease area acquired and shall include areas under green belt development, areas along roads infrastructure, along ML boundary and township etc, by planting native species in consultation with the local DFO/Agricultural Department.</b>	It is being complied
XX XV I	<b>Acid water Treatment Plant, volume of water to be treated and disposal of brine should be provided.</b>	Shall be complied.
XX XV II	<b>Mine discharge water outside the ML shall be monitored, particularly for TDS and treated to confirm prescribed levels before discharge into the natural environment.</b>	Mine discharge water is being allowed to settle down in the mine sumps before disposal into storage reservoirs. The monitoring of water quality parameters is being done through CMPDIL, Ranchi and parameters are well within the prescribed limit provided by CPCB. (Soft copy of Monitoring report is enclosed as Annexure II)
XX XV III	<b>The Company shall put up artificial groundwater recharge measures for augmentation of ground water resource, incase water table shows a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mines.</b>	Presently water is not being discharged outside the ML. Excess mine water is being stored at old quarries and ponds for community use. This will help to recharge the ground water.
XX XI X	<b>Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational disease and hearing impairment, if any, through an agency such as NIOH, Ahemdabad within a period of one year and the results reported to this Ministry and to DGMS.</b>	<b>NIOH study:-</b> Final report has been submitted by NIOH which has already been scrutinized by Medical department, BCCL. Soft copy of NIOH Report is enclosed as Annexure V
xI	<b>The mining in the existing mines would be phased out after expiry of the current mining lease and after reclamation of mined over area. The operating mines may be analyzed and monitored for compliance of conditions, having bearing with movement of wild life until such time they are closed/phased out.</b>	Shall be complied.
xIi	<b>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.</b>	It is being complied.
xIii	<b>High root density tree species shall be selected and planted over likely areas to be affected by subsidence.</b>	It is being complied.
xIiii	<b>Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.</b>	It is being complied.
xIiv	<b>Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.</b>	It is being complied.
xIv	<b>The CSR Action Plan shall consist of need-based CSR Action Plan, CSR Auditing and monitoring mechanism etc. The proponent will spend 5% of the retained earnings of the previous year subject to a minimum of Rs.5/- per tonne of coal production which should be adjusted as per the annual inflation. The progress made there on shall be uploaded on the company website. Monitoring of the impact of the activities under CSR shall be carried out periodically</b>	It is being complied.

xIvi	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. The gap/space available between the entire mine area should be suitably planted with native species. Plantation should also be made in vacant area and along the road side so as to reduce dust pollution.	<p>BCCL is implementing CSR activities. A separate CSR committee has been formed at area level of Barora, who will look after the works being executed under CSR. CSR dept is established at the Headquarter level and area level for Executing the CSR Activities.</p> <p>All welfare/ CSR activities are also uploaded in Company web site.</p> <p>TISS has conducted survey to frame CSR policy for better implementation and monitoring of the CSR activities. Details of CSR expenditure done at BCCL level is attached as Annexure IV</p>																																							
xIvi i	Central recreation park with herbal garden should be developed for use of all inhabitants.	It shall be complied.																																							
xIvi ii	The mine water should be treated properly before supply to the villager.	It is being complied.																																							
xlix	Mine discharge water shall be treated to meet standards prescribed standards before discharge into natural water courses/agriculture. The quality of water discharge shall be monitored at the outlet and proper records maintained thereof and uploaded regularly on the company website.	<p>Regular monitoring of Water Quality Parameters is being carried out by CMPDIL.</p> <p>(Soft copy of Monitoring report is enclosed as Annexure II)</p>																																							
I	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 stabilized with plantation and the periphery of the reservoir fenced. The abandoned pits and voids should be backfilled with OB and reclaimed with plantation and or may be used for pisciculture.	It shall be complied.																																							
li	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 dome 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.	<p>Groundwater level and quality is being monitored by CMPDIL. The Location and design of Piezometers to be installed have been finalized by CMPDIL</p> <p>3 hydrograph stations (<b>A-24, B-32A and B-61A</b>) are located in the core zone of the mine area. Water level monitoring in these monitoring stations has been done in the months of February, April, August &amp; November‘2018 and the Ground water level data is enclosed in the table below:</p> <table><tr><th rowspan="2"></th><th rowspan="2">Well No.</th><th rowspan="2">Location</th><th colspan="4">Water level (bgl in meters)</th></tr><tr><th>Feb‘18</th><th>Apr‘18</th><th>Aug‘18</th><th>Nov‘1</th></tr><tr><td></td><td>A-24</td><td>Pipratntr</td><td>11.68</td><td>14.58</td><td>5.78</td><td>6.88</td></tr><tr><td></td><td>B-32A</td><td>Madhuband</td><td>3.23</td><td>6.75</td><td>2.80</td><td>3.90</td></tr><tr><td></td><td>B-61A</td><td>Kesargora</td><td>1.27</td><td>2.57</td><td>2.0</td><td>2.02</td></tr><tr><td colspan="3">Avg. GW (bgl)</td><td>5.39</td><td>7.97</td><td>3.63</td><td>4.27</td></tr></table> <p><b>Peizometer installation:</b> Tender has been cancelled thrice. The estimate is being revised in association with CMPDI for re-tendering.</p>		Well No.	Location	Water level (bgl in meters)				Feb‘18	Apr‘18	Aug‘18	Nov‘1		A-24	Pipratntr	11.68	14.58	5.78	6.88		B-32A	Madhuband	3.23	6.75	2.80	3.90		B-61A	Kesargora	1.27	2.57	2.0	2.02	Avg. GW (bgl)			5.39	7.97	3.63	4.27
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		(Soft copy of Ground Water Report Attached as Annexure VI)
1ii	<b>ETP shall also be provided for workshop, and CHP, if any. Effluents shall be treated to confirm to prescribe standards in case discharge into the natural water course.</b>	Construction of ETP/Oil grease Trap will be taken-up
1iii	<b>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: 50000) 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.</b>	Presently a time series map of vegetation cover in the Jharia Coal Field is being carried out through CMPDI, Ranchi using satellite imagery for every 3 years & it has been uploaded on the official website of company. Further CMPDI has been requested to prepare “Time series of land use maps based on satellite imagery of the core zone and buffer zone in the scale 1:50000 (Soft copy of land use Pattern Attached as Annexure VII)
1	<b>A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment &amp; 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. The mining plan and post –mining plan, closure plan should be prepared and submitted to the Ministry.</b>	CMPDI has prepare the “Final Mine Closure Plan along with a Plan for Habitat Restoration and with details of Corpus Fund”. BCCL has deposited the amount in a separate Escrow Account for corpus fund as per Mine Closure Guidelines as specified in the mine closure Plan. (Escrow account details attached as Annexure VIII)
1v	<b>A separate management structure for implementing environment policy and socio-economic issues and the capacity building required in this regard.</b>	Complied. A full-fledged Environment cell, with a suitable qualified multidisciplinary team of executives has been established. GM (Environment) at head quarter level, co-ordinates with all the Areas and reports to the Director (Technical) and in turn he reports to the CMD of the company. Socio economic issues and capacity building are being evaluated by Tata Institute of Social Science.
1vi	<b>Corporate Environment Responsibility:</b> <b>a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.</b>  <b>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.</b>  <b>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</b>	A well defined Corporate Environment Policy has already been laid down and approved by Board of Directors. This is also posted on BCCL website ( <a href="http://www.bcclweb.in/environment/CEP_04.11.2019.pdf">http://www.bcclweb.in/environment/CEP_04.11.2019.pdf</a> ). Complied.  A hierarchical system of the company to deal with environmental issues from corporate level already exists.  Being complied.

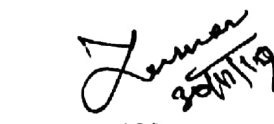


	<b>d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.</b>	Being complied.
<b>B</b>	<b>General Conditions by MoEFCC:</b>	
<b>i</b>	<b>No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.</b>	Being complied.
<b>ii</b>	<b>No change in the calendar plan of production for quantum of mineral coal shall be made.</b>	Being complied.
<b>iii</b>	<b>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.</b>	The location of monitoring stations in Jharia Coal Field has been finalized in consultation with the Jharkhand State Pollution Control Board. Ambient air quality along with heavy metals such as Hg,As,Ni,Cd,Cr ,etcis regularly monitored by CMPDIL.  (Soft copy of Monitoring Report is attached as Annexure II)
<b>iv</b>	<b>Data on ambient air quality (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> 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 recognized under the EPA rules,1986 shall be furnished as part of compliance report.</b>	Data on ambient air and other monitoring data is being regularly submitted to the Ministry along with compliance report. (Soft copy of Monitoring Report is attached as Annexure II)
<b>v</b>	<b>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.</b>	It is being Complied in mines and also the Noise levels are below the Ambient Noise Standard (Day time 75 dB & Night Time (70 dB for Industrial Area).  Regular maintenance of vehicles and other machineries are being practiced for control of noise level. Ear plugs/muffs are provided to the persons engaged in blasting and drilling operations, operation of HEMM, etc (Soft copy of Monitoring Report is attached as Annexure II)
<b>vi</b>	<b>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.</b>	The work of monitoring of ambient environment is being done by CMPDIL, Ranchi.Physico-Chemical characteristics of effluents are well within the prescribed limit. (Soft copy of Monitoring Report is attached as Annexure II)
<b>vii</b>	<b>Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.</b>	Being complied. Regular maintenance of vehicle is being practiced to kept vehicular emission under control. Coal is being transported in tarpaulin covered trucks.

viii	<b>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 analyzed through a laboratory recognized under EPA Rules, 1986.</b>	Monitoring of Environmental quality parameters have been regularly done by CMPDIL, Ranchi with proper analysis equipment. (Soft copy of Monitoring Report is attached as Annexure II)								
ix	<b>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.</b>	It is being complied. A separate full-fledged Human Resource Development Department is conducting regular training programme on these issues. Apart from this Vocational Training Centers are existing in all the areas of BCCL, which provides periodical training on the safety and occupational health issue to each of the workers working in the mines.								
x	<b>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.</b>	Initial Medical Examination (IME) and Periodical Medical Examination (PME) of all the personnel is carried out as per the Statutes and Director General of Mines Safety (DGMS) guideline. Details of PME conducted is given below: <table border="1"> <tr> <th rowspan="2">Nam of Colliery</th><th colspan="2">FY</th></tr> <tr> <th>2018-19</th><th>2019-20 Up to 25.11.2019</th></tr> <tr> <td>Kharkharee Colliery</td><td>141</td><td>135</td></tr> </table> <p><b>NIOH study:</b> Final report has been submitted by NIOH which has already been scrutinized by Medical department, BCCL. (Soft copy of NIOH Report is attached as Annexure V)</p>	Nam of Colliery	FY		2018-19	2019-20 Up to 25.11.2019	Kharkharee Colliery	141	135
Nam of Colliery	FY									
	2018-19	2019-20 Up to 25.11.2019								
Kharkharee Colliery	141	135								
xi	<b>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.</b>	A full-fledged Environment cell, with a suitable qualified multidisciplinary team of executives has been established. GM (Environment) at head quarter level, co-ordinates with all the Areas and reports to the Director (Technical) and in turn he reports to the CMD of the company. Socio economic issues and capacity building are being evaluated by Tata Institute of Social Science								
xii	<b>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.</b>	It is being complied. Separate head “plantation” & “ Environment” is there for recurring expenditure and used for Ecorestoration, environmental protection measures, statutory payments,etc.								
xiii	<b>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 &amp; Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a>.</b>	Complied. Advertisement in local newspaper has been given.								
xiv	<b>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</b>	Complied. Clearance letter has been displayed on Company web site.								

	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 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	Complied.
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.	Complied.
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.	Complied/Being complied.
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.	Noted. Project authority is ready to extend its full cooperation for any kind of visit and inspection conducted by Regional Office in connection with EC Conditions Compliance.
xix	The Environmental statement for each financial year ending 31 March in Form-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 company's website along with the status of compliance of Environment condition and shall be sent to the respective Regional Offices of the MOEF by e-mail.	Environmental Statement (Form-V) has been regularly submitted for mines which are under operation for each financial year to Jharkhand State Pollution Control Board.

  
 General Manager  
 Govindpur Area

  
 General Manager  
 Barora Area  
 Harsana  
 30/11/19