



## भारत कोकिंग कोल लिमिटेड

(A Subsidiary of Coal India Ltd)

Office of the General Manager

Eastern Jharia Area,

P.O. Bhowra, Dist: Dhanbad (Jharkhand) 828302

Ref .No. BCCL/GM/EJA/2013/2688

Date- 25/07/2013

To  
The Director (S)  
Ministry of Environment & Forest  
Govt. of India,  
Eastern region Office  
A/3, Chandrasekharpur, Bhubneshwar-751023.

Subject:- Six monthly report on implementation of Environmental protection Measures for the period from Oct. 2012 to March 2013 in respect of Cluster X group of mines of BCCL.

Ref:- EC-Order No.:- J-11015/380/2010-IA.II(M)dated 06.02.2013.

Dear Sir,

Kindly find enclosed here with the Six monthly report on implementation of Environmental protection Measures for the period from Oct. 2012 to March 2013 in respect of Cluster X group of mines of BCCL.

Hope you will find same in order.

Encl.:- as above.

Yours Faithfully

General Manager  
E. J. Area, BCCL  
Cluster X

C.c. to:-

- 1) Dr. Sunita Aulock, Director, 1A Monitoring cell  
Paryavaran Bhawan CGO Complex, New Delhi- 110003.
- ✓ 2) G.M. (Env.) BCCL, Koyla Bhawan, Dhanbad.
- 3) Addl. G.M., E.J. Area.
- 4) Area Manager (PIng.), E.J. Area.
- 5) Area Manager (Civil), E.J. Area.
- 6) Area Manager (Safety), E.J. Area.
- 7) Office File
- 8) Master File

**ENVIRONMENTAL CLEARANCE COMPLIANCE OF CLUSTER-X**  
**(GRANTED VIDE J-11015/380/2010-IA.II (M) Dated 06.02.2013)**  
(Upto March 2013)

Sl. No.	A. Specific Conditions by MOEF:	Compliance
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 X as below:	The production from the cluster is within the limit for which environmental clearance has been granted.
li	All the void /water bodies should be backfilled upto ground level and no OB dump at the end of mining.	It shall be complied. Action is being taken as specified in EMP.
lii	Extensive plantation should be provided on either side of Damodar River;	Action has been taken for their eco-restoration work as per Road Map prepared by FRI,
iv	Details of impact of mining on Damodar River should be assessed and provided;	Study on Damodar River will be taken up by CMPDI.
V	Impact of mining on ground water of the area (Impact Zone) should be provided;	Study will be taken up by CMPDI.
Vi	A Garland drain should be provided and the drain water should not be discharged in to Damodar River;	It will be provided.
Vii	Excess water from mine after treatment should be supplied to the villagers;	It shall be complied.
Viii	Rejects of washery along with dry carbon slurry should be utilized in power plant and other recognized vendors;	It shall be complied.
Ix	There should be no discharge from the Washery (slurry) in to the Damodar River. The entire washery water should be recycled;	It shall be complied.
X	Damodar River should be protected by plantation on both sides;	It shall be complied.
Xi	A herbal garden with medicinal plants be developed;	Being complied. Action has already been taken for identification of land for development of herbal garden for the inhabitants/ nearby society under the CSR activity of the company.
Xii	A time schedule for filling of existing and abandoned quarries be done;	It is being complied. Yearly plantation is being done for development of green belts as per EMP.
Xiii	Of the total water body area of 286.54 ha in the post-mining land use, consist of 243.97 ha of natural water bodies like Damodar river and no. of water ponds. Only 42.57 ha of mine voids were proposed to be converted to artificial water bodies for catering to domestic use of local villagers. Keeping in view the Damodar river in the vicinity, there	It shall be complied.

	<b>should be no additional water bodies are created from mine.</b>	
Xiv	<b>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.</b>	Master Plan is dovetailed with environmental clearance conditions.
xv	<b>As there is no fire in Cluster X but the measure should be adopted by proponent to control spread of neighboring fire to this Cluster X. 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.</b>	Work has been awarded to NRSC (earlier NRSA). A MoU is to be entered with the NRSC for start of the work. For this purpose, duly signed MoU has been sent to NRSC for necessary processing at their end and to start the work immediately .(Copy enclosed as Annexure-A)  Action is being taken as specified in the Master Plan and EMP.
xvi	<b>Underground mining should be taken up after completion of reclamation of Opencast mine area after 2 years.</b>	It is being complied. Mining is being done as per the guidelines and approval/permission of Directorate General of Mines Safety (DGMS).
Xvii	<b>No mining shall be undertaken where underground fires continue. Measure shall be taken to prevent/check such fire including in old OB dump.</b>	It is being complied.
Xvii i	<b>A part of cluster X is under River Damodar. 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.</b>	CMPDI RI-2 has been requested to conduct study of permeability and seepage of water of River Damodar.
Xix	<b>The rejects of washeries in Cluster –X should be send to FBC based plant.</b>	It shall be complied.
Xx	<b>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.</b>	Action is being taken as specified in EMP. Backfilling of OB is going on with mining. At the end of mining there shall be no void and area will be re-vegetated and reclaimed.
Xxi	<b>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- X shall be drawn up and implemented.</b>	Calendar plan has been prepared. Mine closure plan as per the guidelines of Ministry of Coal and on the basis of cluster concept is under preparation by Central Mine planning and Design Institute (CMPDI).

Xxii	<b>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 recognized 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</b>	It shall be complied. A part of the void will be converted into the water body as specified in EMP.
Xxii i	<b>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.</b>	It is being followed. Action for construction of embankment has been taken as specified in EMP
xxi v	<b>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.</b>	No OB is being dumped near water bodies. Further action has been taken for their eco-restoration work as per Road Map prepared by FRI, Dehradun.
xxv	<b>Thick green belt shall be developed along undisturbed areas, mine boundary and in mine reclamation. During post mining stage, a total of 47.63 ha 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.</b>	It is being complied. Yearly plantation is being done for development of green belts as per EMP.
xxv i	<b>The road should be provided with avenue plantation on both side as trees act as sink of carbon and other pollutant.</b>	It shall be complied.
Xxv ii	<b>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 –XIV shall be implemented.</b>	Dhanbad Action Plan is being implemented. The salient actions of this cluster <ol style="list-style-type: none"> <li>1. Covered transportation of coal.</li> <li>2. Water sprinkling</li> <li>3. Plantation.</li> </ol>
xxv iii	<b>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, 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</b>	The fixing up of locations of monitoring stations in the Jharia Coalfields has been taken up with the Jharkhand State Pollution Control Board. (Annexure-B)  The work of monitoring of ambient environment will be done through Central Institute of Mining & Fuel Research (CIMFR), Dhanbad which is having CSIR laboratory recognized under the EP

	<b>(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.</b>	Rules. For the source apportionment study the action has been taken with help of CMPDIL.  Presently ambient air is being monitored through BCCL own Laboratory at HQ level.
Xxi x	<b>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.</b>  <b>The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry to dewatering of mine.</b>	It is being complied and mine water is being used for the industrial purpose. Further Mine water is also utilized for the community and irrigation purposes. Following actions has been taken by the company 1. Installation of Pressure filters for utilisation of mine water 2. Rain water Harvesting
Xxx	<b>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 &amp; 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.</b>	It shall be complied. The work of monitoring will be done through Central Institute of Mining & Fuel Research (CIMFR), Dhanbad which is having CSIR laboratory recognized under the EP Rules. Presently CMPDI is monitoring the ground water level.  Fixing up the monitoring stations for this purpose is in process with Jharkhand State Pollution Control Board.
Xxx i	<b>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.</b>	It shall be complied. Jharkhand State Pollution Control Board has been consulted for this purpose. The monitoring will be done through Central Institute of Mining & Fuel Research (CIMFR), Dhanbad which is having CSIR laboratory recognized under the EP Rules. Presently mine water is being monitored through BCCL own Laboratory at HQ level.
Xxx ii	<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 is being taken-up.
Xxx iii	<b>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</b>	At present only development districts are operational at UG mines in Cluster X and no depillaring district is taken up. However regular monitoring of subsidence will be undertaken on operating depillaring districts.

	<b>measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material.</b>	
Xxx iv	<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>	Sufficient coal pillars have been left around air shafts as per the statutes and DGMS guidelines.
Xxx v	<b>High root density tree species shall be selected and planted over areas likely to be affected by subsidence.</b>	Identification of high root density Plant and its plantation in subsidence prone area will be taken-up at the time of depillaring operations.
Xxx vi	<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 shall be complied.
Xxx vii	<b>Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.</b>	It is being followed. Sufficient barriers are left for saving the surface installation and infra structures as per the statute and DGMS guidelines.
Xxx viii	<b>No depillaring operation shall be carried out below the township/colony.</b>	It is being followed.
Xxx ix	<b>The Transportation Plan for conveyor-cum-rail for Cluster- X 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 transpiration of coal during phase-I should be by mechanically covered trucks.</b>	Action has been taken for formulating adequate transportation plan for conveyor cum rail system of dispatch. CMPDIL has been requested to prepare the plan. By that time transportation is being done by covering vehicle with tarpaulin cover. Action for mechanically covered trucks has been taken.
XI	<b>A study should be initiated to analyze extent of reduction in pollution load every year by reducing road transport.</b>	CMPDI RI-2 has been requested for Source Apportionment Study.
Xli	<b>R&amp;R of 1670 nos of PAF's involved. They should be rehabilitated at cost of Rs 7087.75 Lakhs as per the approved Jharia Action Plan.</b>	Implementation is being done as per the Master plan.
xlii	<b>Details of transportation, CSR, R&amp;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.</b>	It is being followed.
Xliii	<b>A detailed CSR Action Plan shall be prepared for Cluster X 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 47.63 ha of area within Cluster XIV 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</b>	It shall be complied. BCCL is implementing CSR activities.

	<p>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.</p>	
xliv	<p><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: 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.</b></p>	<p>Complied. Presently a time series map of vegetation cover in the Jharia Coal Field is being carried out through CMPDI Ranchi.</p> <p>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 for every 3 years.</p>
Xlv	<p><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.</b></p>	<p>CMPDI has been requested to prepare "Final Mine Closure Plan along with a Plan for Habitat Restoration and with details of Corpus Fund".</p>
xlvi	<p><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 for implementing environment policy and socio-economic issues and the capacity building required in this regard.</b></p>	<p>A full-fledged Environment Department, headed by a HoD (Environment) along with a suitable qualified multidisciplinary team of executives (12 nos.) which includes Environment, Mining, Excavation, Civil, Survey, Electrical &amp; mechanical, Forestry disciplines executives and technicians (4 nos.) has been established in Headquarters. They are also trained in ecological restoration, sustainable development, rainwater harvesting methods etc. At the project level, one Executive in each area has also been nominated as Project Nodal Officer (Environment) and is also entrusted with the responsibility of compliance and observance of the environmental Acts/ Laws including environment protection measures. The activities are monitored on regular basis at Area and at Head quarters levels. GM (Environment) at head quarter level, co-ordinates with all the Areas and reports to the Director (Technical) and</p>

		<p>in turn he reports to the CMD of the company.</p> <p>The team is multidisciplinary and very much motivated under the guidance of company's Director (Technical) and CMD. Further capacity building at both corporate and operating level is being done.</p>
Xlvi i	<b>Implementation of final mine closure plan for Cluster X, subject to obtaining prior approval of the DGMS in regard to mine safety issues</b>	For the purpose of safety issues related to the closure of mine prior approval of DGMS will be taken.
Xlvi ii	<p><b>Corporate Environment Responsibility:</b></p> <p><b>A The Company shall have a well laid down Environment Policy approved by the Board of Directors.</b></p> <p><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></p> <p><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></p> <p><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></p>	<p>A well defined Corporate Environment Policy has already been laid down and approved by the Board of Directors. This is also posted on BCCL website.</p> <p>Complied.</p> <p>A hierarchical system of the company to deal with environmental issues from corporate level to mine level already exists.</p> <p>Being complied.</p>
<b>B</b>	<b>General Conditions by MOEF:</b>	
i	<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.
ii	<b>No change in the calendar plan of production for quantum of mineral coal shall be made</b>	Being complied.
lii	<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>	<p>The fixing up of locations of monitoring stations in the Jharia Coalfields has been taken up with the Jharkhand State Pollution Control Board.</p> <p>The work of monitoring of ambient environment will be done through Central Institute of Mining &amp; Fuel Research (CIMFR), Dhanbad which is having CSIR laboratory recognized under the EP Rules.</p>



iv	<b>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 9recognized under the EPA rules, 1986 shall be furnished as part of compliance report.</b>	It shall be complied.
V	<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>	Being Complied.
Vi	<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 fixing up of locations of monitoring stations in the Jharia Coalfields has been taken up with the Jharkhand State Pollution Control Board. The work of monitoring of ambient environment will be done through Central Institute of Mining & Fuel Research (CIMFR), Dhanbad which is having laboratory recognized under the EP Rules. Presently mine effluent is being monitored through BCCL own Laboratory at HQ level.
vii	<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>	It shall be Complied.
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 analysed through a laboratory 9recognized under EPA Rules, 1986.</b>	It is being done.
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>	Being Complied. Vocational training Centers under separate Human Resource Development Deptt. Is conducting regular training programme on these issues.
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</b>	Initial Medical Examination (IME) and Periodical Medical Examination (PME) of all the personnel are carried out as per the Statutes and Director

	<b>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>	General of Mines Safety (DGMS) guideline.
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 Department, headed by a HoD (Environment) along with a suitable qualified multidisciplinary team of executives (12 nos.) which includes Environment, Mining, Excavation, Civil, Survey ,Electrical & mechanical, Forestry disciplines executives and technicians (4 nos.) has been established in Headquarters. They are also trained in ecological restoration, sustainable development, rainwater harvesting methods etc. At the project level, one Executive in each area has also been nominated as Project Nodal Officer (Environment) and is also entrusted with the responsibility of compliance and observance of the environmental Acts/ Laws including environment protection measures .The activities are monitored on regular basis at Area and at Head quarters levels. 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.  The team is multidisciplinary and very much motivated under the guidance of company's Director (Technical) and CMD. Further capacity building at both corporate and operating level is being done.
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.
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>	It has been complied.  Advertisement in local newspaper is enclosed as annexure-C.

xiv	<b>A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, 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.</b>	Complied.
Xv	<b>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.</b>	Complied.
Xvi	<b>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.</b>	Complied.
Xvii	<b>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.</b>	Being complied.
Xvii i	<b>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.</b>	Shall be complied.
Xix	<b>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</b>	Being complied.

	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	
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25/07/13  
General Manager,  
EJ Area, BCCL

## Annexure- A

**BCCL**



**Bharat Coking Coal Limited**

(A Subsidiary of Coal India Limited)  
Office of HOD(Environment)  
Koyla Bhawan, Koyla Nagar  
Dhanbad 826005

Ref. No.BCCL/HOD(Env)/F- MP/13/ 610

Dated 21.05.2013.

To,

Dr Vinod Kumar,  
Group Head, Geosciences group  
Sc/Eng-SG  
National Remote Sensing Centre  
Indian Space Research Organization  
Dept of Space,Govt Of India,Balanagar,Hyderabad  
Andhra Pradesh-500625

**Subject :** Regarding proposal for "Delineation of Surface Coal Fire and associated Land Subsidence in Jharia coalfield, Jharkhand using satellite based remote-sensing techniques at a cost of Rs 19.70 Lakhs submitted by e-mail on 15.05.2013

D/Sir,

We are in receipt of the aforesaid proposal, sent by email on 15.05.2013, covering two components of the scope of study and subsequent communication by BCCL vide letter no. BCCL/D (T) Op/F-Env/2012/148(A) dated 11.02.2013:

**Part 1:** Coal Fire mapping of Jharia Coalfield using Thermal Infra-red data – for a cost of Rs. 6,70,721=00. The study is proposed to be completed within 8 months and

**Part 2:** Land subsidence mapping of Jharia Coalfield using Interferometric SAR data - for a cost of Rs. 12,98,571=00. The study is proposed to be completed within 12 months.

Competent authority of BCCL has approved both the two components as above .You are therefore requested to submit your invoice for 90% amounting to 17.73 Lakhs, of the cost of the project Rs 19.00 Lakhs at the earliest for placing the work order and releasing the 90% amount.

Thanking you,

Yours faithfully,

HOD (Environment)

## Annexure- B



**BHARAT COKING COAL LIMITED**  
(A Subsidiary of Coal India Limited)  
Office of the HOD(Environment)  
Koyla Bhawan, Koyla Nagar  
Dhanbad

Ref.No.BCCL/HOD(Env.)/F-EC/13/262

Dated 27-02-2013

To,  
The Member Secretary,  
Jharkhand State Pollution Control Board,  
T.A. Division Building (Ground Floor),  
H.E.C., Dhurwa,  
Ranchi – 834004.

Sub.: Reg. fixing locations of monitoring station for Air, Water, Noise,  
Ground Water.

Dear Sir,

Please refer to our earlier letter nos.BCCL/HOD(Env.)/F-EC/13/186, dated 18.2.2013 and BCCL/HOD(Env.)/F-EC/13/254, dated 27.2.2013 along with copy of environmental clearance of Clusters I, II, III, IV,V,VII,VIII, X & XVI enclosed therewith.

As per the specific conditions and general conditions laid down in the aforesaid environmental clearances granted Cluster-wise by MoEF, you are requested to advise the Regional Officer, JSPCB, Dhanbad for fixing the locations of monitoring stations for Air, Water, Noise, Ground Water.

This is required for making the compliances and report to MoEF and your good office in respect of environmental clearances granted to the Clusters.

Yours faithfully,


(Dr. EVR Raju)  
HOD (Environment)

Copy to :

Regional Officer, JSPCB, Dhanbad



# Annexure- C

 <b>भारत कोकिंग कोल लिमिटेड</b> <b>(कोल इण्डिया लिमिटेड का एक अंग)</b>		
<p>सभी संबंधित व्यक्तियों को यह सूचित किया जाता है कि निम्नलिखित 09 (नौ) भारत कोकिंग कोल लिमिटेड का समूह (Cluster) जिसमें 63 खाने एवं 02 वाहरीय समिलित हैं, को पर्यावरण एवं वन मंत्रालय के द्वारा पर्यावरण सफाया (Environmental Clearance) प्रदान किया जा चुका है।</p>		
क्र. सं.	समूह (Cluster) का नाम	स्वीकृति आदेश संख्या एवं तिथि
1.	समूह (Cluster) I : मेसर्स भारत कोकिंग कोल लिमिटेड, झारिया कोलिफिल्ड्स में स्थित, ब्लॉक चन्द्रपुर, जिला- धनबाद, झारखंड की दामोदा समूह की 3 खानें- दामोदा (एलबिशन शाखा) ओसीपी, दामोदा चुजीपी एवं दामोदा बीजे सेक्टर समूह की खानें (575 हेक्टेयर की एक समिलित एम एल क्षेत्र में 0.9 एम टी पी ए सामान्य एवं 1.17 एम टी पी ए (उच्च))	जे-11015/93/2009-1ए. 11 (एम) दिनांक : 6 फरवरी 2013
2.	समूह (Cluster) II : मेसर्स भारत कोकिंग कोल लिमिटेड, झारिया कोलिफिल्ड्स में स्थित, जिला- धनबाद, झारखंड की 2025.71 हेक्टेयर की एक समिलित एम एल क्षेत्र में (20.215 एम टी पी ए की उच्च उत्पादन के साथ 15.55 एम टी पी ए समिलित उत्पादन क्षमता की 5 खानें)	जे-11015/35/2011-1ए. 11 (एम) दिनांक : 6 फरवरी 2013
3.	समूह (Cluster) III : मेसर्स भारत कोकिंग कोल लिमिटेड, झारिया कोलिफिल्ड्स में स्थित, जिला- धनबाद, झारखंड की 1420.61 हेक्टेयर की एक समिलित एम एल क्षेत्र में 3.6 एम टी पी ए की उच्च उत्पादन की 7 खानें (04.11.2010 को प्रदान की गई टी ओ आर पर आधारित ईसी)	जे-11015/213/2010-1ए. 11 (एम) दिनांक : 6 फरवरी 2013
4.	समूह (Cluster) IV : गसलीटीड कोलिदरी भूमिगत को छोड़कर मेसर्स भारत कोकिंग कोल लिमिटेड, झारिया कोलिफिल्ड्स में स्थित, जिला- धनबाद, झारखंड की 1123.79 हेक्टेयर की एक समिलित एम एल क्षेत्र में 2.851 एम टी पी ए (सामान्य) 3.706 एम टी पी ए (उच्च) की उत्पादन क्षमता के साथ 6 खानें।	जे-11015/212/2010-1ए. 11 (एम) दिनांक : 6 फरवरी 2013
5.	समूह (Cluster) V : मेसर्स भारत कोकिंग कोल लिमिटेड, झारिया कोलिफिल्ड्स में स्थित, जिला- धनबाद, झारखंड की 1957.08 हेक्टेयर की एक समिलित एम एल क्षेत्र में 4.854 (सामान्य) 6.311 (उच्च) एम टी पी ए के उत्पादन की 7 खानें (16.03.2011 को प्रदान की गई आई टी ओ आर पर आधारित ई सी)	जे-11015/01/2011-1ए. 11 (एम) दिनांक : 11 फरवरी 2013
6.	समूह (Cluster) VII : मेसर्स भारत कोकिंग कोल लिमिटेड, झारिया कोलिफिल्ड्स में स्थित, जिला- धनबाद, झारखंड की 2127.7 हेक्टेयर की एक समिलित एम एल क्षेत्र में 8.16 एम टी पी ए की उच्च उत्पादन के साथ 6.227 एम टी पी ए की समिलित क्षमता (09.12.2010 को प्रदान की गई टी ओ आर पर आधारित ईसी) (कुस्तोर भूमिगत एवं पूर्वी भगतडीह को छोड़कर)	जे-11015/238/2010-1ए. 11 (एम) दिनांक : 6 फरवरी 2013
7.	समूह (Cluster) X : मेसर्स भारत कोकिंग कोल लिमिटेड, झारिया कोलिफिल्ड्स में स्थित, जिला- धनबाद, झारखंड की (2057.95 हेक्टेयर की एक समिलित एम एल क्षेत्र में 1.762 एम टी पी ए की सामान्य एवं 2.289 एम टी पी ए की उच्च उत्पादन की 6 खानें) एवं 19 हेक्टेयर के एक क्षेत्र के लिए 1.6 एम टी पी ए सामान्य तथा 2.08 एम टी पी ए उच्च उत्पादन की सुदामडीह कोल वाशरी (सुदामडीह शाफ्ट माइन के लीन होल्ड के अन्दर) (09.02.2011 को प्रदान की गई टी ओ आर पर आधारित ई सी)	जे-11015/380/2010-1ए. 11 (एम) दिनांक : 6 फरवरी 2013
8.	समूह (Cluster) XVI : मेसर्स भारत कोकिंग कोल लिमिटेड, जिला- धनबाद, झारखंड में कोयला खानें (दहीबाड़ी - बसन्तीमाता ओ सी पी, बसन्तीमाता भूमिगत खान, नई लायकडीह ओ सी पी (दहीबाड़ी कोल वाशरी सहित), लायकडीह शॉप भूमिगत, चौध भूमिगत) (1964.21 हेक्टेयर के एक समिलित एम एल क्षेत्र में 1.51 एम टी पी ए सामान्य तथा 1.963 एम टी पी ए उच्च) तथा 12 हेक्टेयर के क्षेत्र में 1.6 एम टी पी ए की दहीबाड़ी वाशरी (28.05.2010 को प्रदान की गई टी ओ आर पर आधारित ई सी)	जे-11015/185/2010-1ए. 11 (एम) दिनांक : 6 फरवरी 2013
9.	समूह (Cluster) VIII : मेसर्स भारत कोकिंग कोल लिमिटेड, झारिया कोलिफिल्ड्स में स्थित, जिला- धनबाद, झारखंड के 10 खानों का समूह (1183.92 हेक्टेयर के एक समिलित एम एल क्षेत्र में 5.603 एम टी पी ए की उच्च उत्पादन के साथ 4.31 एम टी पी ए को समिलित क्षमता (12.0041 हेक्टेयर - 1649 हेक्टेयर = 1183.92 हेक्टेयर)	जे-11015/298/2010-1ए. 11 (एम) दिनांक : 15 फरवरी 2013
<p>सफाया पत्र की प्रतिलिपि झारखंड राज्य प्रदूषण नियंत्रण बोर्ड के पास उपलब्ध है तथा इसे पर्यावरण एवं वन मंत्रालय की वेबसाइट "http://envfor.nic.in" और भा. को. लि. के कार्यालय वेबसाइट "http://www.bccl.gov.in" पर भी देखा जा सकता है।</p>		
<p>ह0/-</p>		

 <b>Bharat Coking Coal Limited</b> <b>(A Subsidiary of Coal India Limited)</b>		
<p>This is to bring into notice of all concerned that the following 09 (Nine) Clusters of BCCL consisting of 63 Mines and 02 washeries are granted Environmental Clearances by Ministry of Environmental and forests.</p>		
Sl. No.	Name of the Cluster	Sanction order number and date
1.	Cluster-I (Damoda Group of 3 Mines - Damoda (Albion Section) OCP, Damoda UGP and Damoda BJ Section OCP) Group of Mines (of 0.9 MTPA normative and 1.17 MTPA (peak) in a combined ML area of 575 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, Block Chandrapur, Dist. Dhanbad, Jharkhand.	J-11015/93/2009-1A.II (M) dated 6th Feb. 2013
2.	Cluster-II (5 mines of a combined prod. capacity 15.55 MTPA with a peak production of 20.215 MTPA) in a combined ML area of 2025.71 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand.	J-11015/35/2011-1A.II (M) dated 6th Feb. 2013
3.	Cluster-III (7 mines of a peak production of 3.6 MTPA in a combined ML area of 1420.61 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand (EC based on TOR granted on 04.11.2010).	J-11015/213/2010-1A.II (M) dated 6th Feb. 2013
4.	Cluster-IV (6 mines with production capacity 2.851 MTPA (Normative) 3.706 MTPA (Peak) in a combined ML area of 1123.79 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand excluding Gasitand Colliery UG.	J-11015/212/2010-1A.II (M) dated 6th Feb. 2013
5.	Cluster-V (7 mines of a 4.854 (Normative) and 6.311 (Peak) production of MTPA in a combined ML area of 1957.08 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand (EC based on TOR granted on 16.03.2011).	J-11015/01/2011-1A.II (M) dated 11th Feb. 2013
6.	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 Bhugatdih).	J-11015/238/2010-1A.II (M) dated 6th Feb. 2013
7.	Cluster-X (6 mines of 1.762 MTPA of normative and peak production of 2.289 MTPA in a combined ML area of 2057.95 ha) and Sudamdih Coal Washery (Within the lease hold of Sudamdih Shaft Mine) of 1.6 MTPA of normative and 2.08 MTPA peak production for a area of 18 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand (EC based on TOR granted on 09.02.2011).	J-11015/380/2010-1A.II (M) dated 6th Feb. 2013
8.	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).	J-11015/185/2010-1A.II (M) dated 6th Feb. 2013
9.	Cluster-VIII Group of 10 Mines (combined capacity 4.31 MTPA with a peak prodn. of 5.603 MTPA in a combined ML area of 1183.92 ha (1200.41 ha-1649 ha=1183.92 ha) of M/s Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand.	J-11015/298/2010-1A.II (M) dated 15th Feb. 2013
<p>The copy of the clearance letter is available with the Jharkhand State Pollution Control Board and may also be seen at the website of the Ministry of Environmental and forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> and on the official website of BCCL at <a href="http://www.bccl.gov.in">http://www.bccl.gov.in</a></p>		