



**BHARAT COKING COAL LTD.**  
(A Subsidiary of Coal India Ltd.)  
**OFFICE OF THE GENERAL MANAGER**  
**BARORA AREA**

Ref No. GM/AR-1/Survey/USo8/2014

Dated 06.01.2014

To  
The Director  
Ministry of Environment & Forest  
Chandrasekharpur  
Post-Kailashpur  
Bhubaneswar-751023



Sub: Six monthly Compliance report of Environmental Clearance of Cluster-I group of mines for the period from April 13 to Oct.2013.

Ref: EC order no.-J-11015/93/2009-I A. II (M)

Dear Sir,

Please find enclosed herewith six monthly compliance of the conditions of Environmental clearances granted to Cluster-I group of mines of BCCL for the period from April 13 to Oct.2013

With regards

Encls: as above

Yours faithfully

General Manager  
Barora Area

C. C. to

1. Sri Sundeep Scientist-D  
Central Pollution Control Board  
Southern Conclave, Block 502, 5<sup>th</sup> & 6<sup>th</sup> floor  
1582, Khandagiri Main Road, Kolkata-700107
2. Member Secretary,  
Jharkhand State Pollution Control Board,  
TA Divn Building, HEC Dhurwa, Ranchi
3. HOD (Env.) BCCL, Koyla Bhawan, Dhanbad
4. Addl. G.M., Barora Area
5. Area Manager (Pig.) Barora Area
6. Nodal Officer, Env. (Area Survey Officer)
7. Project Officer, Damoda Colliery
8. Office file

Sri M. Kumar  
9/1/14

**Compliance of Conditions of Environmental Clearance Granted  
by MoEF for Cluster-1**

EC Order No. J-11015/93/2009-IA.II (M)

Sl. no.	A. Specific Conditions by MOEF:	compliance
i	Production shall not exceed beyond that for which environmental clearance has been granted for the 3 mines of cluster-1, as given below:	The production from the cluster is within the limit for which environmental clearance has been granted
ii	The measures identified in the environmental management plan for Cluster-I group of mines and the conditions given in this environmental clearance letter shall be dovetailed to the implementation of the Jharia Action Plan.	Master Plan is dovetailed with environmental clearance condition.
iii	<p>(a) 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.</p> <p>(b) And monitoring temperatures of 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 re-start fresh/spread fires in other areas including in mines of cluster-I shall be undertaken.</p>	<p>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 from BCCL end has been sent to NRSC for necessary processing at their end and to start the work immediately. (Copy enclosed)</p> <p>Action is being taken as specified in EC and as per Jharia Master Plan.</p> <p>For control and monitoring of fire affected area within Damoda lease hold special attention has been made by mine management. Director of CIMFR, Dhanbad has been requested for scientific study.</p> <p>Action is being taken as specified in Master Plan and EMP.</p>
iv	<p>No mining shall be undertaken where underground fires continue.</p> <p>Measures shall be taken prevent/check such fires including in old OB dump areas where fire could start due to presence of coal/ shale with sufficient carbon content.</p>	<p>There is no fire where underground mine is being worked.</p> <p>There is no fire in OB dump.</p>
v	There shall be no external OB dumps. OB from the 2 patches 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.	Backfilling is being done at old quarry of Albion OCP. During April'13 to Oct'13 three hectare land backfilled/reclaimed upto surface level and process is going on. Plantation work will start in coming

vi	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-1 shall be drawn up and implemented	Calendar plan has been prepared. Mine closure plan has been prepared.
vii	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 Damoda (Albion Section) OC shall be protected to the extent feasible and the embankment proposed along water body shall be strengthened with stone pitching.	It is being followed. Embankments have been constructed as specified in EC
viii	Thick green belt shall be developed along undisturbed areas, mine boundary and in mine reclamation. A total area of 237.79 ha shall be reclaimed and afforested.	Green belt of 6.00Ha.exits in Damoda lease hold Area and Eco restoration of 6.68 Ha. has been already developed in the year 2013-14.
ix	Specific imitative measures identified for the Jharia Coalfields in the Environmental Action Plan prepared for Dhanbad as a critically polluted area and relevant for Cluster-1 shall be implemented.	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>
x	A detailed CSR Action Plan shall be prepared for Cluster-I group of mines. Specific activities shall be identified for CSR for the budget of Rs 13.75 crores provided for CSR for 2010-11 and Rs 5/T of coal as recurring expenditure. The 190.51 ha of area within Cluster-I ML existing as waste land and not being acquired shall be put to productive use under CSR and developed with fruit bearing and other useful species for the local communities. In addition to afforesting 237.79 ha of area at the post-mining stage, the 204.67 ha of fallow/abandoned land and 40.64 ha waste land/barren land within Cluster-I ML shall be rehabilitated/reclaimed as forest/agricultural land under CSR Plan in consultation with local communities. Third party evaluation shall be got carried out regularly for the proper implementation of activities undertaken in the project area under CSR. Issues 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.	<p>A) Proposal for repairing of road from Jamunia river bridge to Patna garage of Damoda Colliery of Rs.2.07 crore has been initiated and 1<sup>st</sup> part of tender has opened on 04/02/2013.</p> <p>B) Drilling of two nos. Bore holes at Karmatand Village, Damoda of Rs. 3.50lakh, TCR has been made.</p> <p>BCCL is implementing CSR activities.</p> <p>A detailed project specific CSR Action Plan shall be formulated and for this purpose, BCCL has approached TATA INSTITUTE OF SOCIAL SCIENCES, MUMBAI which is also the focal agency of the National CSR Hub.</p> <p>TISS, Mumbai has informed that the process of interviewing ,short listing and selection of Program Managers and Program Officers has been completed and their Officers are expected to report on field duty soon.</p>

xi	<p>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.</p>	<p>A work order has been issued to CIMFR, Dhanbad on dated 05.11.2013 to monitor the mine discharged water and they will start work immediately.</p>
xii	<p>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 due to dewatering of mine.</p>	<p>Surface mine water is being used for industrial purpose and for villages and nearer community surface mine water is being delivered through the filtration by pressure filter. Two nos. pressure filter of capacity 10,000 liter/day already installed at Damoda Colliery.</p>
xiii	<p>Continuous monitoring of long-term impacts of dumping of fly ash (for life of the mine) and leaching of heavy metals on soil and water quality of the study area shall be undertaken and the details of which shall be submitted to the Central Ground Water Board, SPCB and to the Regional Office of this Ministry at Bhubaneswar, as part of the compliance report. Permanent monitoring arrangements such as peizometers shall be established in and around mine areas covering potential impact zone for contamination of heavy metals due to leachates from fly ash. In case of increasing levels of heavy metals detected in groundwater, further dumping of fly ash shall be stopped immediately. Independent third party monitoring of impacts of dumping of fly ash shall also be undertaken and reported to the regulatory authorities and uploaded on the company website. In case, the disposal of fly ash into the de-coaled voids is not found to be an environmentally suitable option, the balance void shall be converted into water reservoir of a maximum depth of 35m which shall be gently sloped. The upper benches of the reservoir shall be stabilized with plantation and the periphery of the reservoir fenced.</p>	<p>At present there is no fly ash is being dumped. CMPDI has been requested for fly ash leaching study of the Area.</p>
xiv	<p>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 As and F during the month of May.</p>	<p>A work order has been issued to CIMFR, Dhanbad on dated 05.11.2013 to monitor the ground water level and quality and they will start work immediately (copy enclosed). Fixing up the monitoring station for this purpose is in process with Jharkhand State Pollution Control Board.</p>

	Data thus collected shall be submitted to the Ministry of Environment & Forests 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.	
xv	ETP shall also be provided for workshop, and CHP, if any. Effluents from the mines shall be treated to conform to prescribed standards if is discharged into any water course outside the lease area. The quality of effluent/water discharged shall be monitored at outlet points. Proper records shall be maintained thereof and uploaded regularly on the company's website.	Construction of ETP/ Oil grease Trap is being taken-up.
xvi	For monitoring the land use pattern and 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 to the end of mine life, shall be prepared once in 3 years (for anyone particular season which is consistent in the time series). The report shall be submitted to MOEF and its Regional office at Bhubaneswar.	Complied Presently a time series map of vegetation cover in the Jharia Coal Field is being carried out through CMPDI Ranchi. 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 3years.
xvii	A Final Mine Closure Plan along with a Plan for Habitat Restoration and with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests for approval before the final mine closure. The species selected for Habitat Restoration for post-mining land shall include a specific Plan for development of agro-forestry using a mix of native species found in the study area.	CMPDI, Ranchi has been requested to prepare "Final Mine Closure Plan along with a Plan for Habitat Restoration and with details of Corpus Fund.
xviii	<p><b>Corporate Environment Responsibility:</b> The Company shall have a well laid down Environment Policy approved by the Board of Directors'.</p> <p>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.</p> <p>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.</p> <p>To have proper checks and balances, the company</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>

	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.	Being complied.
B	General Conditions by MOEF::	
i	No change in technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	It is being followed.
ii	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	It is being followed.
iii	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>x</sub> and NO <sub>x</sub> . 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, in particulates shall be carried out at least once in a year.	A work order has been issued to CIMFR, Dhanbad on dated 05.11.2013 to monitor ambient Air quality (as specified) and they will start work immediately.
iv	Data on ambient air quality (PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>x</sub> and NO <sub>x</sub> and heavy metals such as Hg, As, Ni, Cr, etc) 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 EP Rules, 1986 shall be furnished as part of the compliance report.	It shall be complied.
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.	A work order has been issued to CIMFR, Dhanbad on dated 05.11.2013 to monitor noise level (as specified) and they will start work immediately.
vi	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, and treated so as to conform to the standards including for heavy metals before discharge prescribed under GSR422 (E) dated 19 <sup>th</sup> May 1993 and 31 <sup>st</sup> December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	A work order has been issued to CIMFR, Dhanbad on dated 05.11.2013 to monitor industrial waste water (as specified) and they will start work immediately.
vii	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.	It is being followed.

viii	<p><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 recognized under EP Rules, 1986.</b></p>	<p>A work order has been issued to CIMFR, Dhanbad on dated 05.11.2013 to monitor Environmental quality parameter.</p>
ix	<p><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. 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.</b></p>	<p>280 Nos. of Dust Mask has been issued to the employee during April2013-Oct2013 for protection from dust. In safety and Occupation health aspects Training is being provided through our Vocational training centre.</p>
x	<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.</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 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.</p>

xi	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.	It is being followed.
xii	The Project authorities shall advertise at least in two local newspapers that are 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 <a href="http://envfor.nic.in">http://envfor.nic.in</a>	It has been complied.
xiii	A copy of the environmental clearance letter shall be marked to concerned 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 the company's website.	Complied.
xiv	A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.	Complied.
xv	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated 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 the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as $PM_{10}$ , $PM_{2.5}$ and $NO_x$ (ambient and stack if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.	Complied.
xvi	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.	It is being complied.
xvii	The Regional Office of this Ministry located at	Shall be complied.



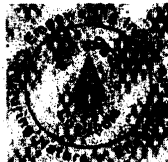
	Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data information/monitoring reports.	
xviii	The environmental statement for each financial year, ending 31 <sup>st</sup> March, in Form-V to be submitted mandatorily by the project proponent to the State Pollution Control Board concerned as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently. This shall also be uploaded on to 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.	Being complied.
C	Other Conditions by MOEF:	
i	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Agree.
ii	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.	Agree.
iii	The above conditions will be enforced <i>inter-alia</i> 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.	It is being complied.
iv	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.	Agree.

Nodal Officer (Env), Barora Area.

General Manager (Barora Area)

## 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**

