

भारत कोकिंग कोल लिमिटेड

एक मिनिरत्न कम्पनी

(कोल इंडिया लिमिटेड का एक अंग)

महाप्रबंधक का कार्यालय, पूर्वी झरिया क्षेत्र

पो.ओ.- भौरा, जिला - धनबाद (झारखण्ड)

पिन - ८२८३०२, दूरभाष - ०३२६-२३२००७७,

ईमेल- cgmej@bccl.gov.in

पंजीकृत कार्यालय: कोयला भवन, कोयला नगर, धनबाद-

८२६००५, (झारखण्ड)

CIN: U10101JH1972GOI000918

दूरभाष-०३२६-२३२००७७/फैक्स: ०३२६-२२३००५०, ईमेल-

cos@bccl.gov.in



Bharat Coking Coal Limited

A MINI RATNA Co.

(A Subsidiary of Coal India Ltd)

Office of the General Manager, Eastern Jharia Area

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

Tel.: 0326-2320077, Email-cgmej@bccl.gov.in

Regd. Off: Koyla Bhawan, Koyla Nagar, Dhanbad-825005,

CIN: U10101JH1972GOI000918,

Tel.: 0326-2230190/FAX: 0326-2230050, Email - cos@bccl.gov.in

Ref. No.: BCCL/EJ/AM (Env.)/2018/ 549

Date: 31/05/2018

To,
The Director
Ministry of Environment, Forests and Climate Change
Regional office (ECZ)
Bungalow No. A-2, Shyamali Colony
Ranchi - 834002
Jharkhand

Sub.: Six monthly compliance report of the conditions of Environmental Clearance granted to Cluster X group of mines of BCCL for the period from October 2017 to March 2018.

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

Dear Sir,

Kindly find the enclosed here with the six monthly compliance report of the conditions of Environmental Clearance for the period from October, 2017 to March 2018 in respect of Cluster X group of mines of BCCL.

Thanking You.

Encl.: Six monthly compliance report with annexure

Yours faithfully

General Manager
Eastern Jharia Area, BCCL
Cluster X

CC to:

1. Director, 1A Monitoring Cell, Paryavaran Bhawan, CGO Complex, New delhi-110003.
2. Dy. GM / HOD (Env.), BCCL, Koyla Bhawan, Dhanbad
3. AGM, E.J. Area, Bhowra, BCCL
4. Area Manager (Env.), E.J. Area
5. Master File

ENVIRONMENTAL CLEARANCE COMPLIANCE OF CLUSTER-X

(GRANTED VIDE J-11015/380/2010-IA.II (M) Dated 06.02.2013)

(From October 2017 to March 2018)

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:	Complied (100%). The production from the cluster is within the limit for which environmental clearance has been granted.
II.	All the void /water bodies should be backfilled up to Ground level and no OB dump at the end of mining.	It shall be complied. Action is being taken as specified in EMP.
III.	Extensive plantation should be provided on either side of Damodar River.	Extensive plantation shall be provided along the Damodar river which is under cluster X. In addition to this, Action has been taken for the plantation or eco-restoration work as per the Road Map prepared by Forest Research Institute (FRI), Dehradun. Annexure I – Details of Plantation in EJ Area (Cluster X)
IV.	Details of impact of mining on Damodar River should be assessed and provided;	Detail study on Damodar River will be taken up by CMPDI. However, CMPDI is carrying out the Environment Monitoring which comprises of sampling and analysis of water from Damodar River (SW 21 & SW 22) under surface water analysis. Result of upstream and downstream samples showing no major changes in water quality of Damodar river.
V.	Impact of mining on ground water of the area (Impact Zone) should be provided;	Study will be taken up by CMPDI. Ground water monitoring is being carried out by CMPDI.
VI.	A Garland drain should be provided and the drain water should not be discharged in to Damodar River;	No mine water is being discharged into Damodar river. Garland drain and toe wall has been provided along the stabilized O.B. dump and then it will be biologically stabilized through plantation/ eco-restoration works.
VII.	Excess water from mine after treatment should be supplied to the villagers;	An action plan for the utilization and treatment of surplus mine water has been prepared. In this regard 26 mines have been identified for implementation of the Phase-I of the action Plan.
VIII.	Rejects of washery along with dry carbon slurry should be utilized in power plant and other recognized vendors;	Being complied.
IX.	There should be no discharge from the Washery (Slurry) in to the Damodar River. The entire washery	All the washeries of BCCL are designed on Closed Circuit System to ensure no

	water should be recycled;	discharge from the washery premises.
X.	Damodar River should be protected by plantation on both sides;	A proposal will be initiated for the plantation purpose along the Damoda river in the area which is under cluster X. In addition to this, Action has been taken for the plantation or eco-restoration work as per the Road Map prepared by Forest Research Institute (FRI), Dehradun.
XI.	A herbal garden with medicinal plants be developed;	Kamini Kalyan Herbal Garden with 3.32 Ha. area has been taken up. Medicinal herbal plants have been planted as per FRI / BCCL Env. Dept. HQ guidelines.
XII.	A time schedule for filling of existing and abandoned quarries be done.	It is being complied.
XIII.	Of the total water bodies 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 should be no additional water bodies are created from mine.	It will be complied.
XIV.	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.	Master plan/Jharia Action Plan is dovetailed with environmental clearance conditions.
XV.	As there is no fire in cluster X but the measure should be adopted by proponent to control the spread of neighboring fire to the cluster X. The proponent shall prepare time series maps of the Jharia Coalfields through NRSA to monitor and prevent fire problems in the Jharia Coalfield 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.	Work has been awarded to NRSC (earlier NRSA) to monitor and prevent fire problems in the Jharia Coalfield and NRSC has submitted their final report. Fire affected area has been reduced from 9.00 Km ² to 2.18 Km ² . For further dealing of fire and subsidence action has been taken and working as per the strategic plan of digging out of fiery coal followed by reclamation. A Global EOI was floated to control fire in Jharia Coalfield. None of the bidder qualified. Presently (i.e. in 2017) the Work Order for "Delineation of Surface Fire and associated land subsidence in Jharia Coal Field using satellite based remote sensing techniques" has already been awarded to NRSC under the MoU signed with NRSC. Measure to prevent ingress of air (ventilation) is being taken as specified in EMP 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. Once the fiery coal is dug-out/excavated there will be no more chance of re-starting or fresh/ spreading of fire into other areas. Annexure II – Work Order awarded to NRSA regarding delineation of the surface coal fire.
XVI.	Underground mining should be taken up after completion of reclamation of Opencast mine area after 2 years.	It is being complied. Mining is being done as per the guidelines and approval/permission of Directorate General of Mines Safety (DGMS).
XVII.	No mining shall be undertaken where underground fires continue. Measure shall be taken to prevent/check such fire including in old OB dump.	It is being complied. There is no fire in Cluster X. However action is being taken to control, mine fires including old OB dump areas as specified in Jharia Master Plan and the mining is being done as per the guidelines and permissions of Directorate General of Mines Safety (DGMS).
XVIII.	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.	CMPDI RI-II has been requested to conduct study of permeability and seepage of water of River Damodar.
XIX.	The rejects of washeries in Cluster –X should be send to FBC based plant.	It will be complied.
XX.	There shall be no external OB dumps. OB produce from the whole cluster will be 29.01 Mm3. 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.	Action is being taken as specified in EMP. O.B. removed from mine/ collieries are back filled in old/ abandoned quarry/voids. At the end of the mining, there shall not be voids and area will be re-vegetated and reclaimed with the proper eco-restoration techniques suggested by the experts available in BCCL and in external agencies i.e. FRI Dehradun, CEMDE Delhi
XXI.	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.	Calendar plan of production and OB removal has been prepared for year 2015-16 to 2017-18. Mine closure plan as per the guidelines of Ministry of Coal have been prepared by Central Mine Planning and Design Institute (CMPDI) and it is being implemented. Annexure III – Calendar Year plan of cluster X for year 2015-16 to 2017-18.
XXII.	The void in 5 ha area shall be converted into a water reservoir of a maximum depth of 15-20 m in post	It shall be complied. A part of the void will be converted into the

	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	water body as specified in EMP. Detailed plan of COCP Bhowra O/C to be prepared for Pisciculture and boat, plantation, sitting arrangement etc. will be provided around the periphery of the reservoir and which will be developed as water recreational park.
XXIII.	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 60 m 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.	It is being followed. Action for construction of embankment has been taken as specified in EMP. Every year monsoon preparation programme is carried out by colliery / mines before the onset of monsoon for protection of mines from rain water flow and to maintain a safe distance from nalas flowing or small water bodies protection in the lease boundary.
XXIV.	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.	No OB is being dumped near water bodies. The OB dumps created earlier already stabilized & further action has been taken for their eco-restoration work as per Road Map prepared by FRI, Dehradun.
XXV.	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.	It is being complied. Yearly plantation is being done for development of green belts as per EMP. Eco-restoration sites of 22.74 Ha. has been already taken up and 4.50 Ha. will be taken up in 2018-19. In addition to this, 3.32 Ha. of area will be developed as Herbal garden center. All the Ecological restoration work in the BCCL is under the supervision of FRI Dehradun/ HQ ENV. Deptt.
XXVI.	The road should be provided with avenue plantation on both side as trees act as sink of carbon and other pollutant.	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. However, it has been requested from colliery to provide a proposal for plantation along the road approaching to colliery office.
XXVII.	Specific mitigative measures identified for the Jharia Coalfields in the Environmental Action Plan prepared for Dhanbad as a critically polluted area and relevant for Cluster -XIV shall be implemented.	Dhanbad Action Plan has been prepared in consultation with Jharkhand Pollution Control Board for entire BCCL. It is being implemented comprehensively for all the mines of BCCL. Some of the salient actions of this cluster are as under: 1. Construction of pucca road. 2. Construction of water reservoir for

		mine water utilization 3. Plantation.
XXVIII.	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 (PM10 and PM2.5) 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.	The locations of monitoring stations have been finalized in consultation with JSPCB. The monitoring work of ambient environment quality is being carried out by Central Mine Planning & Design Institute Limited (CMPDIL) which is having CSIR laboratory recognized under the EP Rules Work Order for the Project "Source Apportionment of ambient air particulate matter in Jharia coalfields region, Jharkhand" has been awarded to CSIR-National Environmental Engineering Research Institute (NEERI), Nagpur. Copy of the work order is enclosed as Annexure IV
XXIX.	No groundwater shall be used for the mining activities. Additional water required, if any, shall be met from mine water or by recycling/reuse of the water from the existing activities and from rainwater harvesting measures. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry to dewatering of mine.	It is being complied and mine water is being used for the industrial purpose like water sprinkling to suppress dust generation, etc. Further Mine water is also utilized for the community and irrigation purposes. Following action has been taken by the company: <ul style="list-style-type: none"> • Installation of Pressure filters for utilization of mine water. In cluster X, there is three nos. of Rapid Gravity Pressure Filter plant of total 1.72 MGD capacity, which is used for supply of water in nearby colonies, houses, quarters. Annexure V – Details of water Filter plants in Cluster X.
XXX.	Regular monitoring of groundwater level and quality of the study area shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality including Arsenic and Fluoride during the month of May. Data thus collected shall be submitted to the Ministry of Environment & Forest and to the Central Pollution Control Board/SPCB quarterly within one month of monitoring. Rainwater harvesting measures shall be undertaken in case monitoring of water table indicates a declining trend.	Regular monitoring of Ground water quality is being carried out by CMPDIL. The Ground water Level and Quality report for Clusters of mines of BCCL (including Cluster X), have been submitted by CMPDIL & attached as Annexure V, Annexure VI – Ground water level and Quality report. Establishment of new piezometers is under process. CMPDI has prepared a report for design location and construction of 23 Nos of Piezometer covering all the 17 clusters of BCCL. Tender for establishing and construction of a network

		of piezometer well system was done on 28.04.2017, in which only one bidder applied who could not fulfill the eligibility criteria. Hence, that tender was cancelled and retendering done. Work to be awarded soon.
XXXI.	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.	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 by CMPDIL and parameters are well within the prescribed limit provided by CPCB.
XXXII.	ETP shall also be provided for workshop, and CHP, if any. Effluents shall be treated to conform to prescribe standards in case discharge into the natural water course.	The work of installation of Oil and Grease Trap arrangement has been taken up with CMPDI. The subject assignment will be completed within eight months from the date of issue of work order.
XXXIII.	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.	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.
XXXIV.	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.	Sufficient coal pillars have been left around air shafts as per the statutes and DGMS guidelines.
XXXV.	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	Identification of high root density Plant species and its plantation in subsidence prone area will be taken-up at the time of depillaring operations.
XXXVI.	Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.	It shall be complied, where ever applicable.
XXXVII.	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.	It is being followed. Sufficient barriers are left for saving the surface installation and infra structures as per the statute and DGMS guidelines.
XXXVIII.	No depillaring operation shall be carried out below the township/colony.	It is being followed.
XXXIX.	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	Action has been taken for formulating the adequate transportation plan for conveyor cum rail system of dispatch. CMPDIL, RI-II has been requested to conduct study and

	<p>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.</p>	<p>prepare the plan in this regarding. By that time transportation is being done by covering vehicle with tarpaulin cover Initiatives has been taken at corporate level of coal India Limited for developing the mechanically covered trucks and a vendor meeting for the same has been held with the OEM on dated 07.05.2016. Further, a proposal for inclusion of mechanically covered trucks in the Contract Terms has been initiated to ensure that the Outsourcing company should deploy Mechanically Covered Trucks for coal Transportation.</p>
XL.	<p>A study should be initiated to analyze extent of reduction in pollution load every year by reducing road transport.</p>	<p>CMPDI is carrying out the study to analyze extent of reduction in pollution load every year by reducing road transport. Pollution load study report for Cluster IV, XIII, XIV and XVI have been submitted by CMPDI and reports for rest of the clusters (including cluster X) are awaited.</p>
XLI.	<p>R&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.</p>	<p>Implementation of master plan has already been started through Jharkhand Rehabilitation and Development Authority (JRDA), Dhanbad and 547 families (Non-BCCL) has been rehabilitated at well-established Jharia Vihar Township located at Belgoria.</p>
XLII.	<p>Details of transportation, CSR, R&R and implementation of environmental action plan for each of the 17 clusters should be brought out in a booklet for and submitted to Ministry.</p>	<p>A separate booklet comprising of CSR activities has been prepared and attached as annexure VII (B). Annexure VII (B) – Detail of CSR activity of Cluster X</p>
XLIII.	<p>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 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</p>	<p>It being complied. BCCL is implementing CSR Activities. CSR action plan of BCCL including CSR budget and expenditure is enclosed as Annexure VII (A). A separate CSR committee has been formed at Area level for cluster-X, who will look after the works being executed under CSR. A booklet comprising of CSR activities conducted by E.J. area has been prepared and attached as annexure VII (B) – Detail of CSR activity of Cluster X.</p>

	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.	
XLIV.	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.	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. The Vegetation Cover Mapping of Jharia Coalfield based on Satellite Data of the Year- 2016 has been submitted by CMPDIL and attached as annexure VII. Annexure VIII – Vegetation Cover Mapping of Jharia Coalfield based on Satellite Data of year 2016.
XLV.	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests five year before mine closure for approval. Habitat Restoration Plan of the mine area shall be carried out using a mix of native species found in the original ecosystem, which were conserved in-situ and ex-situ in an identified area within the lease for reintroduction in the mine during mine reclamation and at the post mining stage for habitat restoration.	Mine closure plan as per the guidelines of Ministry of Coal has been prepared by CMPDI and it is being complied.
XLVI.	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 socioeconomic issues and the capacity building required in this regard.	A full-fledged Environment Department, headed by a HoD (Environment) along with a suitable qualified multidisciplinary team of executives which includes Environment, Mining, Excavation, Civil executives and technicians 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 quarter 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.
XLVII.	Implementation of final mine closure plan for Cluster X, subject to obtaining prior approval of the DGMS in regard to mine safety issues	Final Mine Closure Plan has been prepared for each Mine in this cluster. Before implementation of final mine closure plan, prior permission from DGMS has been taken in regard to mine safety issues.
XLVIII.	<p>Corporate Environment Responsibility:</p> <p>A. The Company shall have a well laid down Environment Policy approved by the Board of Directors.</p> <p>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.</p> <p>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.</p> <p>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.</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.	General Conditions by MOEF:	
I.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	Being complied.
II.	No change in the calendar plan of production for quantum of mineral coal shall be made	Being followed. Production is being done well within production capacity of this cluster as per EC.
III.	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM2.5, SO2 and NOx 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.	<p>The optimum location of monitoring stations in Jharia Coal Field finalized in consultation with the Jharkhand State Pollution Control Board. Ambient air quality is being regularly monitored by CMPDIL.</p> <p>Annexure IX – Environmental Monitoring Report for cluster X.</p>

IV.	Data on ambient air quality (PM10, PM 2.5, SO2 and NOx) 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 recognized under the EPA rules, 1986 shall be furnished as part of compliance report.	Ambient air quality data (PM10, PM2.5 SO2 and NOx) and other monitoring data have been regularly monitored and analyzed by CMPDIL and submitted the report, which is attached. Annexure IX – Environmental Monitoring Report for cluster X.
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.	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). However, ear muffs / ear plugs are provided to the workers engaged in blasting and drilling operations, HEMM operations etc.
VI.	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31 st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	The optimum location of monitoring stations in Jharia Coal Field finalized in consultation with the Jharkhand State Pollution Control Board. Mine water & ground water quality is being regularly monitored by CMPDIL. Physico-Chemical characteristics of effluents are well within the prescribed limit. For installation of oil and grease trap, a proposal has been moved to CMPDIL through HQ coordination.
VII.	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	Vehicular emissions are being under control and the pollution control certificate issued by state pollution control board is also provided to vehicles which are verified by area manager (transport) and area manger (E&M) regularly. All the vehicles used for coal transportation are covered with tarpaulins.
VIII.	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognized under EPA Rules, 1986.	Monitoring of Environmental quality parameters have been regularly done by CMPDIL with proper analysis equipment.
IX.	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	It is being complied. All Personnel working in mines are provided with reparatory masks and safety eyeglass to protect the dust ingestion. A separate full-fledged Human Resource Development Department is conducting

		regular training programme on these issues. Apart from this, Vocational Training Center exist in E.J. area (cluster X), which provides periodical training on the safety and occupational health issue to workers working in the mines.
X.	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.	Initial Medical Examination (IME) and Periodical Medical Examination (PME) of all the personnel are carried out as per the Statutes and Director General of Mines Safety (DGMS) guideline. Annexure X – List of IME and PME of cluster X (EJ Area) for 2017-18.
XI.	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.	A full-fledged Environment Department, headed by a HoD (Environment) along with a suitable qualified multidisciplinary team of executives which includes Environment, Mining, Excavation, Civil executives and technicians 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 Headquarters 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.	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 complied.
XIII.	The Project authorities shall advertise at least in two	It has been complied. Advertisement in

	local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in .	local newspaper has also been done.
XIV.	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.	Complied.
XV.	A copy of the environmental clearance letter shall be shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar's Office for 30 days.	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 PM10, PM2.5, SO2 and NOx (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. The clearance letter has been uploaded on the BCCL website.
XVII.	The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Offices of CPCB and the SPCB.	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.	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	Environmental Statement (Form-V) has been regularly submitted for each financial

	submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF by E-mail.	year to Jharkhand State Pollution Control Board. Annexure XI – Environmental statement (Form-V) of projects/collieries of E.J. attached.
C.	Other Conditions by MOEF:	
i.	The Ministry or any other Competent Authority may stipulate any further condition(s) for environmental protection.	Agreed.
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.	Agreed.
iii.	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules. The Proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.	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.	Agreed.

[Signature]
31/05/18
Area Manager (Env.)
EJ Area

[Signature]
31/5
Project Officer
Bhowra (North),
EJ Area

[Signature]
31/5
Project Officer
Bhowra (South),
EJ Area

[Signature]
31/5/18
Project Officer
ASP,
EJ Area