

<p>Bharat Coking Coal Limited (A Miniratna Company) A Subsidiary of Coal India Limited</p> <hr/> <p>Office of the General Manager, Bastacolla Area, Dhanbad-828111 Fax/Tel. No. 0326-2291238, Email: cgmbastacolla@bccl.gov.in</p>	<div data-bbox="776 155 914 357" data-label="Image"> </div> <div data-bbox="760 411 930 491" data-label="Text"> <p>पर्यावरण विभाग बस्ताकोला क्षेत्र</p> </div>	<p>भारत कोकिंग कोल लिमिटेड (एक मिनीरत्न कंपनी) कोल इंडिया लिमिटेड का एक अंग</p> <hr/> <p>महाप्रबंधक का कार्यालय बस्ताकोला क्षेत्र धनबाद-८२८१११</p>
<p>Ref. No./पत्रांक: BCCL:BA:IX:GM:EC Compliance:18:23</p>		<p>Date/दिनांक: 29.05.2018</p>

To,
The Director,
Ministry of Environment & Forest & Climate Change,
Regional Office, ECZ
Bungalow No. A-2, Shyamli Colony
Ranchi – 834002.

Subject: Six Monthly report on compliance of Environmental Conditions for the period of October, 2017 to March, 2018 in respect of cluster VIII group of mines of BCCL.

Ref.: EC Order No. J-11015/298/2010-IA.(M) Dated 15.02.2013.

Dear Sir,

Please find enclosed herewith six monthly report on compliance conditions laid down in Environmental Clearance for the period from October, 2017 to March, 2018 in respect of Cluster VIII group of mines of BCCL.

Thanking you.

Encl: As above alongwith CD.

Yours' faithfully,

General Manager
Bastacolla Area

Copy to:

1. The Director I A, Monitoring Cell, Paryavaran Bhawan, CGO Complex, New Delhi-110003.
2. Member Secretary, Jharkhand State Pollution Control Board, Ranchi
3. Scientist "E" /In-Charge, Zonal Officer Kolkata, Central Pollution Control Board, Kolkata

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

A. Specific Conditions		
Sl. No.	Condition	Compliance/ Action Taken Report
i	The Maximum production shall not exceed beyond that for which environmental clearance has been granted.	It is being complied. The production from the cluster is within the limit for which environmental clearance has been granted. Enclosed as Annexure I.
ii	The road transportation of coal during phase-I should be by mechanically covered trucks. The road used for coal transportation should be developed with avenue plantation on both sides.	It is being complied. Presently coal transportation has been done by trucks with tarpaulin cover. Covering of truck has been made mandatory in the transportation contract. Avenue Plantation has been done along the roads.
iii	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.	Company is organizing training and other professional awareness programs to carry out work in future.
iv	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 form.	It is being complied. Details of Transportation, CSR, R&R and Implementation of Environmental Action Plan is being sent on Annual Basis i.e. Compliance Report of 2nd Half Year Ending in March.
v	A study should be initiated to analyse extent of reduction in pollution load every year by reducing road transport.	It is being complied. The study has been initiated and presently going on by the CMPDIL to analyse the extent of reduction in pollution load every year by reducing road transport. Final report is yet to be submitted by CMPDIL. Enclosed as Annexure II.
vi	The expertise available internationally should be utilized for control of fire in Jharia Coalfields and for their reclamation and to further minimize time for fire and subsidence control.	It is under process. Global Expression of Interest had been opened for the international experts/firms/consultants/agencies to deal with coal mine fire in Jharia Coalfield with vision of reclamation, further minimization of spread of fire & subsidence control for which no bidder has qualified to take up the work. Enclosed as Annexure-III.
vii	The abandoned pits and voids should be backfilled with OB and reclaimed with plantation and or may be used for pisciculture.	It is being complied. Backfilling process in abandoned pits and voids are continuously carried out along with the mining operation. Ecological restoration practices is being carried out at the stable OB dumps from where coal has been extracted upto combined seam and grass seed are also sown on the slopes of the dumps for slope stability.
viii	BCCL may consider setting up a separate management structure for implementing environment policy and socio-economic issues and the capacity building required in this regard.	A full-fledged Environment Department, headed by a Dy.GM (Environment) along with a suitable qualified multi-disciplinary team of executives and technicians has been established at Company Headquarters. One Executive in each area has also been nominated as Nodal Officer (Environment) for implementing environment policy. The activities are monitored on regular basis at Area and at Headquarter levels.

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ix	The locations of monitoring stations in the Jharia Coalfields should be finalized in consultation with the Jharkhand State Pollution Control Board.	It has been complied. The optimum location of monitoring stations in Jharia Coal Field has been identified with the consultant advisory of CMPDIL and also finalized with the permission of Jharkhand State Pollution Control Board. Enclosed as Annexure IV.
x	The 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.	Tendering for conducting Source Apportionment Study has been done twice but none of the bidders qualified criteria of e-NIT/e-Tender document. NEERI, Nagpur has submitted the proposal regarding source apportionment study under the MoU Signed between NEERI, Nagpur and CIL. Proposal has been approved by competent authority and work order is issued. Enclosed as Annexure V.
xi	Mineralogical composition study should be undertaken on the composition of the suspended particulate matter (PM ₁₀ and PM _{2.5}) 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.	As it is the part of source apportionment study, tendering for conducting Source Apportionment Study has been done twice but none of the bidders qualified criteria of e-NIT/e-Tender document. NEERI, Nagpur has submitted the proposal regarding source apportionment study under the MoU Signed between NEERI, Nagpur and CIL. Proposal has been approved by competent authority and work order is issued. Enclosed as Annexure V.
xii	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.	It has been complied. NRSC was engaged for preparation of time series maps to monitor and prevent fire problems of Jharia Coalfield by Isothermal mapping/imaging and monitoring temperatures of the coal seams and NRSC has submitted their final report in March'2014 in which the area of fire has been reduced from 9.00 Km ² to 2.18 Km ² . A MoU has been signed between BCCL and NRSC and in this connection a work order has been given to NRSC to delineate surface fire and associated land subsidence in Jharia Coalfield using satellite based remote sensing techniques. The aforesaid work has been initiated by NRSC. Enclosed as Annexure VI.
xiii	Measures to prevent ingress of air (Ventilation) in such areas, to prevent restart fresh/spread fires in other areas including in mines of cluster VIII shall be undertaken.	Action is being taken as per Jharia Master Plan approved by GOI and State Govt. of Jharkhand. Excavation/ Open Cast mining is being done in the fire/subsidence affected mines to dig out combustible materials to save the coal from burning and to prevent further spread of the fire. Once the fiery coal is dug-out/excavated there will be no chance of further re-starting/spreading of fresh fire into other areas.
xiv	Underground mining should be taken up after completion of reclamation of Opencast mine area after 15 years.	It shall be complied. Underground Mining will be done after extraction of upper seams and beneath backfilled and reclaimed area.

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xv	No mining shall be undertaken where underground fires continue. Measure shall be taken to prevent/check such fire including in old OB dump areas where the fire could start due to presence of coal/shale with sufficient carbon content.	It is being complied. Action is being taken to control, mine fires including old OB dump & areas as specified in Jharia Master Plan and the open cast mining is being done in fire affected areas.
xvi	The rejects of washeries in Cluster –VII should be send to FBC based plant.	Not applicable. Coal washery does not exist in this cluster.
xvii	There shall be no external OB dumps. 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.	It shall be complied. At the end of the mining, there shall be no void and area will be re-vegetated and reclaimed with the proper reclamation techniques suggested by the experts available across the globe.
xviii	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-VIII shall be drawn up and implemented.	Mining operation is being done as per approved Calendar plan. Mine closure plan as per the guidelines of Ministry of Coal has been prepared by Central Mine Planning and Design Institute (CMPDI). Progressive mine closure activities is being implemented regularly as per approved Mine Closure Plan.
xix	The void shall be converted into a water reservoir of a maximum depth of 15-20 m and shall be gently sloped and the upper benches of the reservoir shall be stabilized with plantation and the periphery of the reservoir fenced. The abandoned pits and voids should be backfilled with OB and biologically reclaimed with plantation and or may be used for pisciculture.	It is being complied. Abandoned pits are regularly filled with Over burden. At present extraction of coal by opencast method is being done in overlying seams. Old quarries where coal is already extracted is converted into water reservoir. Water from these old quarries/water reservoir is being used by local community.
xx	Mining shall be carried out as per statute 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 long water body shall be strengthened with stone pitching.	It is being followed. Mining is being done as per the guidelines and permissions of Directorate General of Mines Safety (DGMS) in accordance with Coal Mines Regulation, 1957. Action for construction of embankment will be done as specified in EMP.
xxi	Active OB dumps near water bodies and rivers should be rehandled for backfilling of abandoned mine voids. However, those which have been biologically reclaimed need not be disturbed.	It is being complied. The OB dumps created earlier are already stabilized. Fresh OB dumps will be taken for their eco-restoration work as per Road Map prepared by FRI, Dehradun.

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xxii	Thick green belt shall be developed along undisturbed areas, mine boundary and in mine reclamation. During post mining stage, a total of 704.48 Ha area would be reclaimed. The total additional area under plantation would be 345.06ha (67.79 Ha abandoned quarry area, 277.27 Ha active quarry area, 48.55 ha OB dump outside quarry area, 6.30 ha service building/mine infrastructure area/coal dump etc, 108.26 ha green belt around OCP, 196.31 ha barren area), by planting 1761200 plants in 704.48 ha at a total cost Rs. 7202.46 lakhs.	It is being complied. Plantation has been regularly done on mined out areas, OB dumps in scientific manner to minimize the effects of pollutants (Particulate Matters, SOx & NOx etc.). Presently Bastacolla area is carrying out the ecological restoration projects in an area of 19.65 Ha. Every year, Sites for Ecological Restoration is taken up for the improvement of environment and reclamation of degraded lands/OB Dumps. Three Tier plantation has been done in order to protect environment from pollutant and develop a self-sustained ecosystem.
xxiii	The road should be provided with avenue plantation on both side as trees act as sink of carbon and other pollutant.	It shall be complied. Avenue plantation has been partly done in non-coal bearing areas as well as in colonies. Carbon sequestration study may be conducted to assess the impact of plantation to reduce the pollutants.
xxiv	Specific mitigative measures identified for Jharia Coalfields in the Environmental Action plan prepared for Dhanbad as a Critically polluted area and relevant for Cluster VII shall be implemented.	It is being complied in the name of Dhanbad Action Plan. It has been prepared in consultation with Jharkhand Pollution Control Board for entire BCCL and not on cluster basis. It is being implemented comprehensively for all the mines of BCCL. Some of the salient actions of this cluster are as under: 1. Covered Truck Transport 2. Construction of Pucca Road. 3. Construction of water reservoir for mine water utilization 4. Plantation. Etc.
xxv	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 the entire Jharia Coalfields. Mineralogical composition study should be undertaken on the composition for 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.	It is being complied. Establishment of ambient environment quality monitoring stations has been finalized with the consultation of Jharkhand State Pollution Control Board. Tendering for conducting Source Apportionment Study has been done twice but none of the bidders qualified criteria of e-NIT/e-Tender document. NEERI, Nagpur has submitted the proposal regarding source apportionment study under the MoU Signed between NEERI, Nagpur and CIL. Proposal has been approved by competent authority and work order is issued. CMPDIL is presently carrying out the ambient environment monitoring work. Enclosed as Annexure IV.

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xxvi	<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.</p> <p>The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry to dewatering of mine.</p>	<p>It is being complied. Mine water is being used for the industrial as well as domestic purpose. Mine water is also supplied to colonies and community after filtration through pressure filters, slow sand filters and rapid sand filters. Proposal for mine water supply to nearby village/community is taken up under CSR Policy of the company. An MoU has been signed between Coal India Ltd. & Govt. of Jharkhand for providing mine water to nearby villages. A copy of MoU has been enclosed as Annexure VII.</p>
xxvii	<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 Arsenic and Fluoride during the month of May. Data, thus collected shall be submitted to the Ministry of Environment & Forest and to the Central Pollution Control Board/SPCB quarterly within one month of monitoring. Rainwater harvesting measures shall be undertaken in case monitoring of water table indicates a declining trend.</p>	<p>It is being complied. CMPDI RI-II is regularly conducting study of groundwater level and quality of areas within Cluster VIII. Groundwater monitoring data has been enclosed as Annexure VIII.</p>
xxviii	<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>It is being complied. Mine discharge water is being allowed to settle down in the mine sumps before filtration through various types of filter viz. Pressure Filter, Slow Sand Filter & Rapid Sand Filter. The monitoring of water quality parameters was being done through CMPDIL. Mine water quality data has been enclosed as Annexure XV.</p>
xxix	<p>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.</p>	<p>It shall be complied. Presently workshops are on Coal bearing area and they will dismantled soon due to fire and subsidence. New workshop at Non Coal Bearing area will be equipped with ETP.</p>
xxx	<p>Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material.</p>	<p>It is being complied. Regular subsidence monitoring has been done at underground mines. In cluster VIII, presently subsidence monitoring has been done at Bastacolla Colliery.</p>

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xxxix	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.	It is being complied. Sufficient coal pillars have been left around air shafts as per the statutes and DGMS guidelines.
xxxix	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	It is being complied. Planation is regularly done in leasehold area of Cluster VIII. High root density plants are regularly planted as per the roadmap prepared by Forest Research Institute, Dehradun.
xxxix	Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.	It is being complied. Time to time depression created by the mining operations have been filled by the locally available material and over burden removed from active quarry.
xxxix	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 Coal Mines regulation 1957 and DGMS guidelines.
xxxix	No depillaring operation shall be carried out below the township/colony.	It is being complied. Prior permission is always obtained from DGMS for depillaring.
xxxix	The Transportation Plan for conveyor-cum-rail for Cluster-VIII 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-VII should be dovetailed with Jharia Action Plan. The road transpiration of coal during phase-I should be by mechanically covered trucks.	Action has been taken for the transportation plan for conveyor cum rail system of dispatch. CMPDIL, RI-II has been requested to conduct study and prepare the plan in this regard. Transportation is being done by covering vehicle with tarpaulin cover and it is made mandatory in Transportation Contracts. Annexure IX.
xxxix	A study should be initiated to analyze extent of reduction in pollution load every year by reducing road transport.	It is being complied. The study has been initiated and presently going on by the CMPDIL to analyse the extent of reduction in pollution load every year by reducing road transport. Enclosed as Annexure II.
xxxix	R&R of 4959 nos of PAF's involved. They should be rehabilitated at cost of shifting to safe areas at the cost of Rs 29948 Lakhs as per the approved Jharia Action Plan.	Implementation of master plan has already been started through Jharia Rehabilitation and Development Authority (JRDA), Dhanbad PAFs (Non-BCCL) have been rehabilitated at well-established Jharia Vihar Township located at Belgoria and other places. Till date 1007 Nos of PAFs have been rehabilitated. Enclosed as Annexure X.

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xxxix	<p>A detailed CSR Action Plan shall be prepared for Cluster VIII group of mines. Specific activities shall be identified for CSR the budget of Rs. 215.5 Lakhs per year@ Rs. 5/T of coal as recurring expenditure. The 265.25 ha of area within Cluster VIII 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 250.57 ha of area at the post-mining stage, the waste land/barren land within Cluster VIII 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. 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>	<p>It is being complied. BCCL is implementing CSR activities at various scale. A separate CSR committee has been formed at area level, which is looking after the works being executed under CSR. Bastacolla area is constructing 238 Nos. of toilets under CSR activity in different schools in Simdega district of Jharkhand under flagship program (Swachh Bharat Abhiyan) initiated by Hon'ble Prime Minister of India. Other details related to CSR is incorporated in CSR Booklet as per Specific Condition No 4.</p>
xL	<p>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.</p>	<p>It is being complied. Land Use Map of Cluster VIII has been prepared by CMPDIL using remote sensing data for monitoring of land use pattern and for post mining land use. Enclosed as Annexure XI.</p>
xLi	<p>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.</p>	<p>It shall be complied. CMPDI, Ranchi has prepared "Mine Closure Plan". In order to restore the original ecological system, Bastacolla Area has initiated restoration project at various sites having area of 24.67 Ha. Native species of flora and fauna can be seen on these sites.</p>

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xLii	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.	A full-fledged Environment Department, headed by a Dy.GM (Environment) along with a suitable qualified multi-disciplinary team of executives and technicians has been established at Company Headquarters. One Executive in each area has also been nominated as Nodal Officer (Environment) for implementing environment policy. The activities are monitored on regular basis at Area and at Headquarter levels.
xLiii	Implementation of final mine closure plan for Cluster VIII, subject to obtaining prior approval of the DGMS in regard to mine safety issues.	Mine Closure Plan, has been prepared for each Mine in this cluster. Progressive mine closure has been implemented regularly as per the approved Mine Closure Plan prepared by CMPDIL. Prior information/intimation to DGMS will be given before final mine closure with due regard to mine safety issues.
xLiv	<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 uploaded on company's website. Enclosed as Annexure XII.</p> <p>It is being complied.</p> <p>A hierarchical system of the company to deal with environmental issues from corporate level to mine level already exists.</p> <p>It is being complied.</p>
B. General Conditions:		
i	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	It shall be complied as per the approved EC of Cluster VIII.
ii	No change in the calendar plan of production for quantum of mineral coal shall be made.	Production is being done as per the approved calendar programme/ MoU target.

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iii	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM ₁₀ , PM _{2.5} , SO ₂ and NO _x 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.	It has been complied. The optimum location of monitoring stations in Jharia Coal Field has been identified with the consultant advisory of CMPDIL and finalized with the approval of Jharkhand State Pollution Control Board. Enclosed as Annexure IV. Air quality Monitoring report has been enclosed as Annexure XIII.
iv	Data on ambient air quality (PM ₁₀ , PM _{2.5} , SO ₂ and NO _x) 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.	It is being complied. Data is regularly submitted to ministry along with compliance report.
v	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	It is being complied. Personnel operating HEMMs, drilling machine and other machines comply with safety regulation and are equipped with Personal Protective Equipment. Noise monitoring data has been enclosed as Annexure XIV.
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 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	It is being complied. Effluents discharge standards are regularly monitored by CMPDIL for cluster VIII group of mines. Mine water is being treated using filter plants (Pressure, Sand filters etc.) for its further use in industrial purpose and supply to the community. Mine water monitoring report has been enclosed as Annexure XV.
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.	It is being complied. Vehicles used for transportation of coal are always covered by tarpaulin and being monitored for the vehicular emission by the transporter and BCCL. Copy of some Emission Under Control Certificate has been enclosed as Annexure XVI.
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.	It is being complied. Ambient environmental monitoring is being done by CMPDIL. Monitoring data have been enclosed as Annexures.

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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. A separate full-fledged Human Resource Development Department is conducting regular training programme on these issues. Apart from this Vocational Training Centers are existing in all the Areas of BCCL, which provides periodical training on the safety and occupational health issue to the workers working in the mines. Annexure XVII.
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.	It is being complied. Periodical Medical Examination (PME) of all the mining and other personnel is being carried out regularly at Area Hospital, Tisra as per the Statutes and Director General of Mines Safety (DGMS) guideline. Annexure XVIII.
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.	It has been complied. A full-fledged Environment Department, headed by a Dy.GM (Environment) along with a suitable qualified multi-disciplinary team of executives and technicians has been established at Company Headquarters. One Executive in each area has also been nominated as 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 Headquarter levels.
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. Funds for environmental protection measures area kept in separate head which is only used in environmental management activities. These funds are not diverted into any other works.
xiii	The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at the website of the Ministry of Environment & Forests at http://envfor.nic.in .	It has been complied. Advertisement in local newspaper has also been done.

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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.	It has been complied.
xv	A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar's Office for 30 days.	It has been complied.
xvi	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM ₁₀ , PM _{2.5} , SO ₂ and NO _x (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.	Environmental clearance and six monthly compliance of the EC conditions of the cluster have been uploaded on the company's website (www.bcclweb.in)
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.	It is being complied. Six monthly compliance report is regularly send to (twice in a year) the Regional Office of MoEFCC, Ranchi along with required data and information both in hard copy along with soft copy.
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 will extend its all possible support and cooperation to the Regional Office in any kind of monitoring/visit/data collection etc.

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

xix	The Environment statement for each financial year ending 31 March in Form-V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on 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.	It is being complied. It is being submitted for all the mines of cluster VIII to Head Office of Jharkhand State Pollution Control Board for every Financial Year ending on 31 st March. Copy of the same have been also submitted to Regional Office.
C. Other Conditions by MOEF		
i	The Ministry or any other Competent Authority may stipulate any further condition(s) 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 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.	Agree
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.

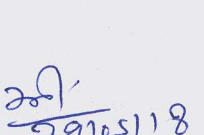

Project Officer
Bastacolla
Colliery


Project Officer
Bera Colliery


Project Officer
Dobari Colliery


Project Officer
Kuya Colliery


Project Officer
Ghanoodih
Colliery


Project Officer
Kujama Colliery

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Annexure- I

Coal Production from Cluster VIII

Month	Production (In Tonnes)
October 2017	188480
November 2017	242270
December 2017	245190
January 2018	299500
February 2018	296590
March 2018	310720
Total	1582750

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines


EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Annexure-II

Study to Analyze the Extent of Pollution Reduction

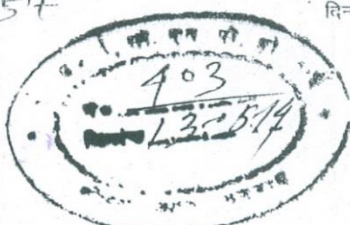
9



सेन्ट्रल माईन प्लानिंग एण्ड डिजाइन इन्स्टीच्यूट लिमिटेड
(कोल इण्डिया लिमिटेड की अनुषंगी कंपनी / भारत सरकार का एक लोक :
गोन्दवाना प्लेस, काँके रोड, राँची - 834 031, झारखंड (भारत)
Central Mine Planning & Design Institute Limited
(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)
Gondwana Place, Kanke Road, Ranchi - 834 031, Jharkhand (IND)

पत्रांक: सी.एन.पी.डी. आई /2014/पर्यावरण /CMP-4/357 दिनांक: 28/04/14

सेवा में,
Director (T) (P&P)
Bharat Coking Coal Limited,
Koyla Bhawan, Koyla Nagar
Dhanbad - 826005



विषय: Studies required for compliance of environmental clearance conditions of BCCL mine under cluster concept.

Ref: (i) Letter no. - BCCL/GM(Env.)/File - EC/13 /622 dt. 24.5.13
(ii) Letter no. CMPDI/BD/B(Env.)/439 dt. 12.9.13

Dear Sir,

The undersigned has been directed to convey that against the above referenced letter at Sl.No. (i), BCCL had enquired CMPDI about the presence of expertise and EDs required for carrying out the studies required for compliance of environmental clearance conditions of BCCL mine under cluster concept.

CMPDI vide letter referenced at Sl.No.(ii) informed BCCL regarding the willingness to undertake the studies and presence of expertise in the following areas -

1. Source Apportionment Study for the entire Jharia Coalfield
2. Continuous monitoring of long term impacts of dumping of fly ash
3. Time series of land use maps based on satellite imagery
4. Study to analyze the extent of pollution reduction
5. Monitoring performance of ecologically restored sites.

However it may be noted that the following studies are currently being carried out by CMPDI for BCCL -

1. Time series map of Jharia CF (Isothermal imaging and monitoring of temperature)
2. Early warning system for detection of fire and subsidence
3. Continuous monitoring of behavior of mine fire, subsidence etc.


All above jobs except source apportionment studies are of continuous nature and since CMPDI has the expertise in carrying them out, it is requested that may be awarded to CMPDI.

सधन्यवाद,

cc: Regional Director, RI-2, CMPDI, Dhanbad :
for kind information with a request to follow up with BCCL

दिनांक: 28/04/14
M-30 E
Dr. Anurag Singh

महोदय,
(डी. बासु) 28/4/14
महा.प्रबन्धक (पर्यावरण)



फोन नम्बर / Phone No : +91 651 2230055, फैक्स नम्बर / Fax No. : +91 651 2230055
वेब साइट / Website Address : www.cmpdi.co.in, e-mail - gmenv.cmpdi@yahoo.co.in

Global Expression of Interest (EoI)

For

Dealing with coal mine fires in lease hold of BCCL in Jharia Coalfield, Dhanbad, Jharkhand, India. Detailed scope of work as given in the document.

LAST DATE OF SUBMISSION : 28.04.2014

1. BHARAT COKING COAL LIMITED: A PROFILE

Bharat Coking Coal Limited incorporated in January, 1972 is a fully owned subsidiary of Coal India Limited a 'Maharatna' Public Sector Undertaking under the Ministry of Coal, Government of India. Being the sole repository of prime coking coal in the country, BCCL, at present operates 66 coal mines spread over in Jharia Coalfield and part of Raniganj Coalfield apart from 6 coking coal washeries & 2 non-coking coal washeries. The mines are grouped under 12 areas for administrative convenience. BCCL has some unique inherent and perennial characteristics which adversely affect the normal operation of the Company. Difficult geo-mining conditions involving large number of overlaying coal seams, preponderance of old workings, high degree of gassiness, coal fires affecting working seams, water logged upper seams above current places of working, etc, restricts coal production and productivity. Besides, high density of population in the coal bearing areas limits the equipment size of opencast operations apart from being an impediment to acquisition of land for uninterrupted operations. In the year 2012-13, the company achieved a coal production of 31.21 million tone and offtake of 32.99 million tone thereby registering the highest ever the Turnover and Profitability (PAT) of Rs 10176.62 Cr. and Rs 1709.06 respectively. A brief description of the organizational structure and the detailed activities of Bharat Coking Coal Limited can be viewed in the website <http://www.bccl.gov.in>.

The mission is to produce planned quantity of coal efficiently and economically in an Eco-friendly manner with due regard to Safety, Conservation & Quality. The company strives to meet the growing demand of thermal as well as metallurgical coal in the country in an environmentally and socially sustainable manner.

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SC-10

2.2. Bidder's Credential Requirement:

- i) The bidder(s) must have successfully dealt with mine fire in at least two coal mines, one open cast and one underground mine. The annual capacity of opencast and underground mines should be at least 2 Mt and 0.5 Mt respectively during last seven years of last financial year. The documentary proof of successful dealing with fire shall be submitted along with the bid.
- ii) The bidders in their name must have achieved a minimum average annual financial turnover of INR One Hundred Million or equivalent USD during last 3 years ending 31st March of previous financial year. The documentary evidence to this effect would be copies of audited Balance Sheet and Profit & Loss A/c duly countersigned by the authorized representative of bidding company and a declaration to the above effect duly signed by the authorized representative of bidding company & counter signed by a Chartered Accountant or equivalent.
- iii) The bidder must possess "key personnel" (minimum number) of the following categories with requisite qualification and experience :-

Sl. No	Skill of key personnel	Requisite Qualification	Minimum Experience	Minimum Nos. for eligibility
1.	Technical Expert (Mining/ Fire dealing/ Mine Rescue)	B.E /B.Tech (Mining) or equivalent	10 years	10
2.	Technical Expert (Geology/Remote Sensing)	M. Sc (Geology) or equivalent	10 years	2
3.	Technical expert (Environment)	B. Tech/BE/M.Sc.(Envr) or equivalent	10 years	1
4.	Technical Expert (Infrastructure)	B.E /B.Tech (Mechanical / Electrical / Civil) or equivalent	10 years	3
5.	IT Expert	B.E /B.Tech/ M.Sc (Computer) or equivalent	10 years	1
6.	Financial Expert	MBA(Finance)/Chartered Accountant/ICWA or equivalent	10 years	1

Note :- The bidder shall designate one of the team members as the team leader.

The documentary evidence to this effect would be self-attested CVs including necessary competency certificate for work in Indian mines duly countersigned by the authorized representative of bidding company.

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- iv) Copy of PAN (Permanent Account Number) with Income Tax Authority in India for bidder(s) from India.
- v) Copy of PAN Based Service Tax Registration Number in India for bidder (s) from India.

3.0 Availability of details for EOI :

Details for EOI including Terms and Conditions of EOI can be collected from the following place during the period as stated below:

Date: From 27.01.2014 to 26.02.2014.

Time: 10.00 AM to 1.00 PM (on all working days)

Office of the GM (CMC)
Contract Management Cell, BCCL
Level-V, Koyla Bhawan,
Dhanbad - 826005

Details for EOI including Terms and Conditions of EOI can also be downloaded directly from the BCCL web-site <http://www.bccl.gov.in> and NIC Portal, website <http://www.tenders.gov.in> during the period as mentioned above.

4.0 Pre - EOI submission meeting :

Pre - EOI submission meeting will be held on 14.02.2014 at 11:00AM in the office of GM (CMC), BCCL, Level-V, Koyla Bhawan, Dhanbad for clarifications and discussion.

5.0 GENERAL INSTRUCTIONS FOR SUBMISSION OF EOI :

Expression of Interest (EOI) shall be submitted by the Consultants / agencies / firms / organizations in a sealed envelope superscribed with "EOI for Dealing with coal mine fires in lease hold of BCCL in Jharia Coalfield, Dhanbad, Jharkhand, India. Detailed scope of work as given in the document." giving EOI reference no. with date and full postal address & telephone nos. on the envelope.

6.0 RECEIPT OF EOI

EOI will be received in sealed envelopes up to 28.04.2014 at the following address only:

Office of the GM (CMC)
Contract Management Cell, BCCL
Level-V, Koyla Bhawan,
Dhanbad - 826005

The offers may be submitted through post also. BCCL takes no responsibility for delay, loss or non receipt of the offers sent by post. Fax offers or offers sent through e-mail shall not be accepted.

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EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

SC-10

7.0 OPENING OF THE EOI :

EOI shall be opened on 29.04.2014 at 04.00 PM in the office of the GM (CMC), BCCL, Level-V, Koyla Bhawan, Dhanbad-826005.

Bidders are requested to go through the details of EOI document & enclose all the required documents along with the proposal. Each page of the proposal shall be signed with seal.

9.0 Prospective parties may note that mere submission of EOI and / or submission of additional information do not automatically entitle them to claim for pre-qualification. BCCL reserves the right to seek for any other information during the process of evaluation, if required.

10.0 BCCL reserves the right to reject any / all the applications to EOI without assigning any reason(s) whatsoever thereof.

Sd/-
General Manager
(Contract Management Cell)

Distribution :

1. PRO – With a request to publish the abridged EOI as enclosed in local as well as National dailies as per norms of the Company and also arrange to send the paper cutting of publication to the Contract Management Cell.
2. D(T)OP / D(T)P&P / D(F) / D(P) / CVO.
3. GM(Co-ordn) / GM(S&M) / GM(F)/C / GM(M&M) / GM(E&M) / GM(Excv) / GM(P&P) / GM(IE) / GM(System) / Dy. GM (Envl.), BCCL
4. Sr.ES to CMD - for kind information of CMD.
5. HOD (Admn) with a request to display this EOI in Koyla Bhawan Notice Boards.
6. All CGMs/GMs of the Areas including Washery Zones for wide circulation through display in the Notice Boards.
7. Inspector, CISF- with a request to deploy security personnel at the office of GM (CMC), Level-V, Koyla Bhawan on 28.04.2014 from 9:30A.M to 4:00P.M and on 29.04.2014 from 3:30 PM till completion of the meeting.
8. Desk In-Charge, BCCL, M M Division, 4th floor, 6, Lyons Range, Kolkata.
9. CGM / GM (Contract Management Cell), WCL/SECL/NCL/MCL/ECL/CCL & CIL
10. Sri R.K. Choubey, Sr.DEO / Sri B N Banerjee, DEO, CMC Deptt. - to upload this EOI in BCCL Website and forward soft copy of NIC format to GM (System) for uploading the same at NIC portal website (soft copy of the same is enclosed for needful).

Sd/-
General Manager
(Contract Management Cell)

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

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Period: October 2017 to March 2018

Annexure-IV



झारखण्ड राज्य प्रदूषण नियंत्रण पर्वद्
Jharkhand State Pollution Control Board
HIG-1, Housing Colony, Dhanbad-826001

Ph: 0326-2204933

(7)

Letter No.....2650

Dated6/7/13.....

From,

Regional Officer,
Dhanbad

To,

HOD (Env.),
M/s. B.C.C.L.,
Koyla Bhawan, Koyla Nagar,
Dhanbad.

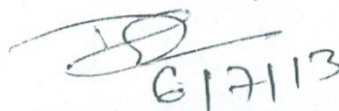
Sub: **Fixing up monitoring station/Sampling location of Air, Water & Noise.**

Sir,

With reference to you letter no. GM(Env.)/F-JSPCB/2013/783, dt. 06.07.2013 We have approved Air, Water & Noise monitoring Station/Sampling location after verification and return a copy of the map.

Encl-A/a.

Your's faithfully,


(Dinesh Prasad Singh)
Regional Officer.

Memo.....

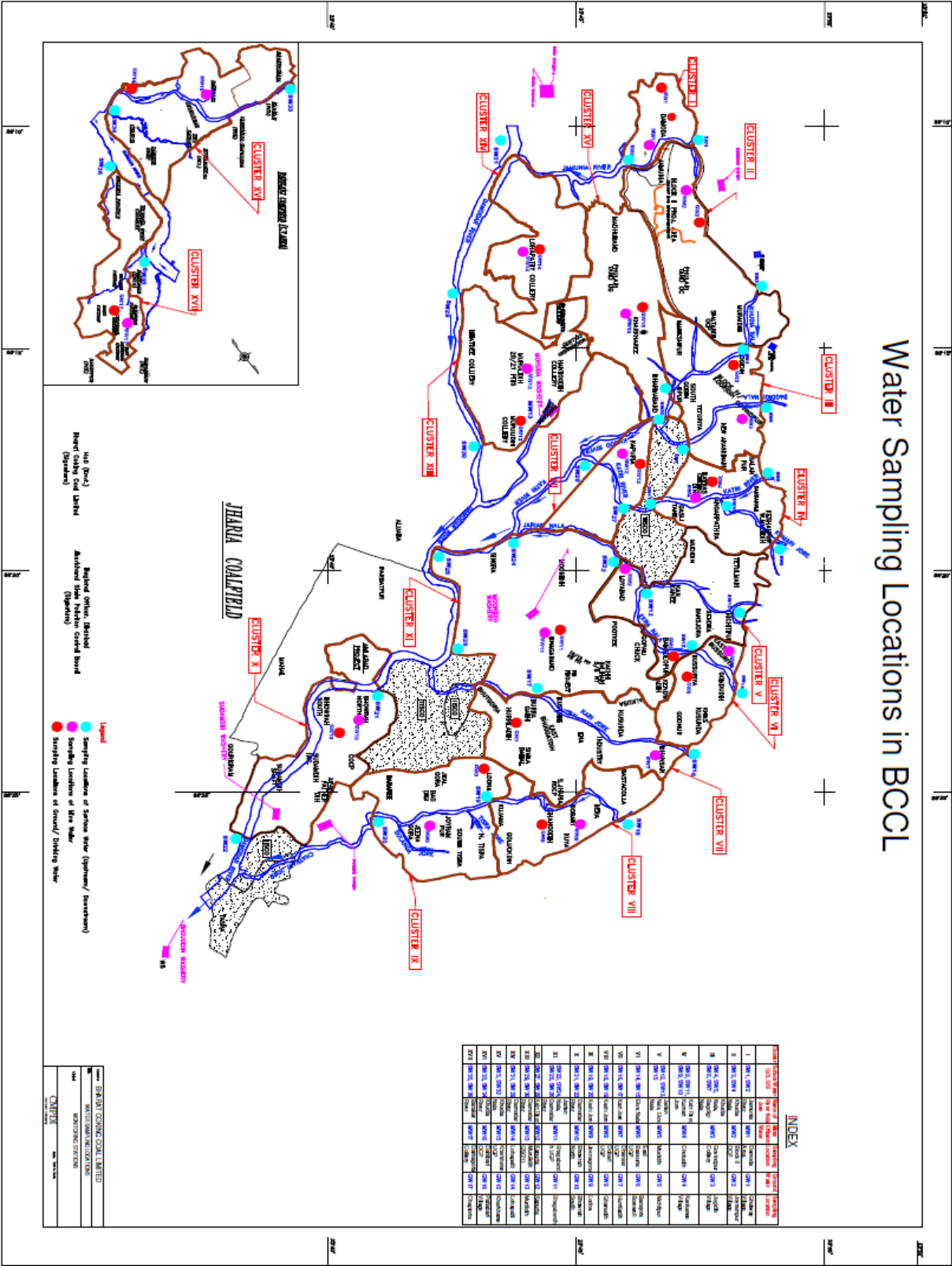
Dhanbad, dated.....

Copy to: The Member Secretary, Jharkhand State Pollution Control Board for information & enclose a copy of the map for necessary action.

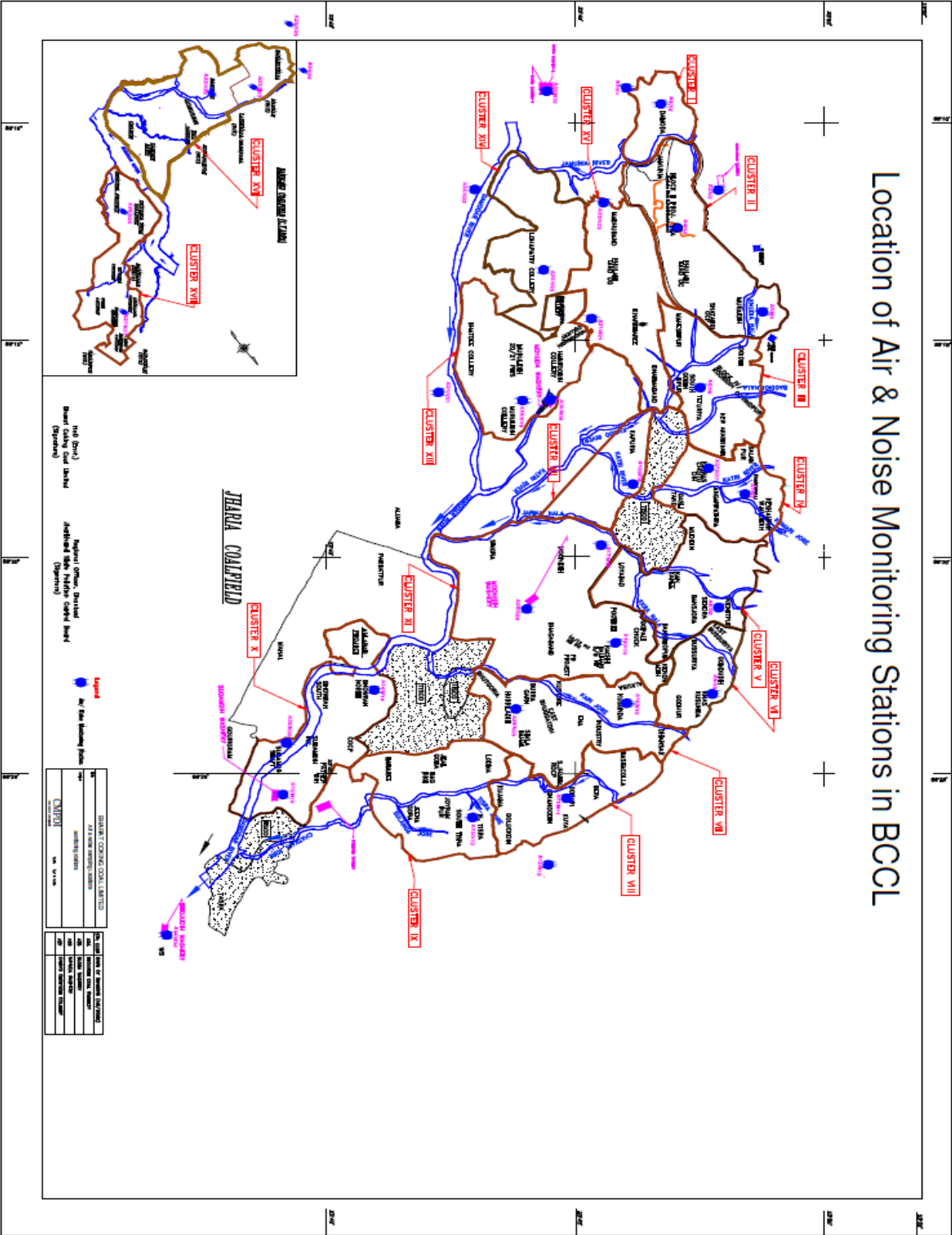
Encl-A/a.

(Dinesh Pd. Singh)
Regional Officer.

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines
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Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines
 EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013
 Period: October 2017 to March 2018



Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

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Period: October 2017 to March 2018

Annexure-V



भारत कोकिंग कोल लिमिटेड

(कोल इंडिया लिमिटेड का एक अंग)

BHARAT COKING COAL LIMITED

(A Subsidiary of Coal India Limited)

Corporate Identity No. (CIN): U10101JH1972GOI000918

Civil Engineering Department, Koyla Nagar, Dhanbad – 826 005 (JH), India.

Phone: 0326-2230338, FAX: 0326-2230338, e-mail: gmcivil@bccl.gov.in

Ref. No.: BCCL/CED/GM (C)/E-NIT-46//2014-15/1637

Date: 31.03.2015

Cancellation of Tender

Name of the Work : **To conduct Source Apportionment Study for varying sources of gasses/smoke/dust emission from source to source for the entire Jharia Coalfields (within and up to 10 K.M from the periphery / boundary of BCCL, Dhanbad, Jharkhand).**

NIT Ref. No. : **BCCL/CED/TC/e-NIT-46/2014-15/1289 dtd. 20.01.2015**

Estimated Cost : **Rs. 56,00,000.00**

The above referred tender stands cancelled. Out of 3 bidders, no bidders qualified in Part – I tender. This issues with competent approval.

Sd/-

General Manager (Civil)

Copy to:-

- 1) CVO/D (T) P&P/D(T) OP, BCCL
- 2) GM (Env't.), Koyla Bhawan
- 3) Chief Manager (Civil), TC
- 4) Prof (Dr.) L.C Singhi, IAS (Retd.), L-31, Third Floor, Kailash Colony, New Delhi-110048
- 5) Shri Naresh Chaturvedi, IAS, (Retd.), CL-14, Sector – II, Salt Lake, Kolkata – 700 091
- 6) M/s Automotive Research Association of India, S. No. 102, Vetar Hill, Off Paud Road, Kothrud, Pune – 411 038, MH
- 7) The Energy and Resources Institute (TERI), Darbari Set Block, IHC Complex, Lodhi Road, New Delhi – 110 003
- 8) M/s Bhagavathi Ana Labs Limited, #8-2-248/5/A/42, Venkateshwara Hills, RoadNo. 3, Banjara Hills, Hyderabad – 500 034
- 9) Notice Board.

..... for kind information

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

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Period: October 2017 to March 2018



COAL INDIA LIMITED
कोल इण्डिया लिमिटेड
ENVIRONMENT DIVISION
पर्यावरण बिभाग

Corporate Identity Number: L23109WB1973GOI028844
COAL BHAWAN, Premises No -04MAR Plot no - AF-III, Action Area- IA
RAJARHAT , NEW TOWN KOLKATA - 700156,
E-mail: cgmenv.cil@gov.in, Web: www.coalindia.in
TEL: 033-23246638 / FAX: 033-23244232

CIL/ENV/2015-16/ 7000

09/12/2015

प्रति,

General Manager(Environment)/ HOD (Environment),
ECL, BCCL, CCL, NCL, SECL, WCL, CMPDIL, NEC, MCL,



Sub: MoU between Coal India Ltd.& NEERI for "Sustainable Coal Mining in Coal India Ltd."

महोदय,

In view of the directive of 321 th CIL Board held on 15 th October 2015 pertaining to enter into a long term MoU between CIL and CSIR -NEERI for identification of environmental issues through assessment of monitoring data of CIL and preparing an action plan for implementing the same in coal mining, MoU has been signed between Coal India Ltd and National Environmental Engineering Research Institute Ranchi, on 3/12/2015.

Copy of the MoU is enclosed herewith for your information.

[Signature] 9/11/2015
मुख्यप्रबंधक/पर्यावरण
सी. आई. एल.,

संलग्न : उपर्युक्त

[Signature]
R. Rangin
9/11/15

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Period: October 2017 to March 2018

भारत कोकिंग कोल लिमिटेड

एक मिनी रत्न कम्पनी

(कोल इंडिया लिमिटेड का एक अंग)

उप महाप्रबंधक (पर्यावरण) का कार्यालय

कोयला भवन, कोयला नगर, धनबाद-826005



Bharat Coking Coal Limited

A Mini Ratna Company

(A Subsidiary of Coal India Limited)

Office of the Dy. GM (Environment)

Koyla Bhawan, Koyla Nagar, Dhanbad -826005

CIN : U10101JH1972GOI000918

पत्र संख्या :भाकोकोलि/उपमहाप्रबंधक/पर्या/(SOURCE APPORTIONMENT (MoU) /NEERI /2018/

दिनांक:12.05.2018

To,

The Director,

CSIR-NEERI,

Nehru Marg,

Nagpur- 440020

Maharashtra

Sub.: Work Order for the Project “Source Apportionment of ambient air particulate matter in Jharia coalfields region, Jharkhand”.

Ref:

(i)Memorandum of Understanding between CIL & NEERI dated 03.12.2015

(ii)your proposal vide email dated 12.09.2016 and subsequent amendment including GST rates

(iii) “Terms of reference for the Project “Source Apportionment of ambient air particulate matter in Jharia coalfields region, Jharkhand” dated 09.03.2018.

(iv) NEERI’s acceptance of “TOR” vide email dated 08.05.2018

Dear Sir,

This has reference to proposal “**Source Apportionment of ambient air particulate matter in Jharia coalfields region, Jharkhand**” vide email dated 12.09.2016. The Competent Authority has approved the award of work to NEERI namely “**Source Apportionment of ambient air particulate matter in Jharia coalfields region, Jharkhand**” for One Crore forty one Lakh and sixty thousand only inclusive of GST(Rs. 1,41,60,000/-) for a period of Twelve(12) months under the MOU dated 03.12.2015 between CIL & NEERI, extended to all subsidiaries of CIL & the terms of reference. The Project-in-charge will be HOD(Environment) or any of his authorized representative.

You are required to comply the scope, objective & terms and conditions in respect of above mentioned work as agreed in the “Terms of Reference” as given below.

1. Scope of the Work:

- To conduct Source Apportionment Study for varying sources of gasses/smoke/dust emission from source to source (fuel wood, coal, fly-ash, TPPs, coke plants, traffic, silica from natural dust etc., but not limited to this) for the entire Jharia Coalfields (within and up to 10 Km from the periphery / boundary of BCCL mines)

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

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Period: October 2017 to March 2018

- Study of Mineralogical composition of the suspended particulate matter (PM10 and PM2.5) with their characterization and quantification.
- Ascertaining sources(fuel wood, coal, fly-ash, TPPs, coke plants, traffic, silica from natural dust etc., but not limited to this) and extent of the air pollution of Jharia coalfield with suggesting cluster-wise appropriate techno-economically viable, mitigation management plan including action plan for the control of pollution level.
- The Environment Clearance has been granted to mines of BCCL on Cluster Basis, the final report must be submitted to BCCL on Cluster Basis. JCF has been divided into Clusters. The study to include the entire Jharia Coalfield along with area up to 10 Km from the periphery / boundary of BCCL mines (Key Plan showing Clusters in Jharia Coalfield enclosed)
- Two Presentations to be made by NEERI- One to BCCL Management before submission of Final report & another to the various stake holders including regulatory agencies after submission of the report.
- The dispersion Model should be on GIS platform
- The Hotspots/bottleneck points to be identified where there is increased pollution on GIS platform.
- Skill transfer and capacity building training for BCCL personnel.
- Accomodation , travel , local transport, other incidental cost and ancillary expenditures to be borne by NEERI.

2. Objectives of the study:

The major objective of the study is to assess the current ambient air quality, sources of air pollution and propose the priorities for the actions for improvement of air quality. The study to include the entire Jharia Coalfield along with area up to 10 Km from the periphery / boundary of BCCL mines. The detailed objectives are as following;

A) Ambient Air Monitoring related

- Monitoring of ambient air quality at selected receptor locations for pollutants including PM10, PM 2.5(limited), SO2, NOx, PAHs to establish the current status of the air quality in Jharia Coalfields along with area up to 10 K.M from the periphery / boundary of BCCL mines. Also review of the available air quality monitoring data from Central Pollution Control Board(CPCB) /Jharkhand State Pollution Control Board(JSPCB) .
- To calibrate dispersion modelling predictions using measured air quality parameters
- To draw supportive data through specific site related monitoring regarding impact causing sources such as kerbside monitoring.
- To establish the impact of meteorological conditions on a few select indicator pollutants in different micro meteorological conditions of the Jharia Coalfields.

B) Emission Inventory related of Jharia Coalfields along with area up to 10 Km from the periphery / boundary of BCCL mines

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- To identify the pollution load grid wise for point, line and area source
 - To establish possibilities of receptor level concentrations of air pollutants by matching dispersion modelling and air quality monitoring data.
- C) Source apportionment related
- To identify and apportion the pollution load at receptor level to various sources in the Jharia Coalfields along with area up to 10 Km from the periphery / boundary of BCCL mines.
 - To carry out the source apportionment using molecular markers for a limited number of samples through a time resolved sample collection at various period of the day and day-of-the-week.
- D) Any other item in consensus between both BCCL/CIL & NEERI evolved during the study

3. TERMS & CONDITIONS:

- You would assist BCCL in clarifying/defending/justifying data of report submitted to regulatory authority or information under RTI, Act or reply of parliamentary Questions or any other litigations if required by Dy. GM (Env).
- CSIR-National Environmental Engineering Research Institute (NEERI) shall associate BCCL in projecting the reports/findings at various national & international forums, Conferences, Seminars, CSIR-National Environmental Engineering Research Institute (NEERI) newsletters & annual reports, meetings of regulatory authorities etc.
- All the materials required with regard to monitoring/analysis, videography, photography and presentation for the work shall be arranged by NEERI at its own cost and shall be of appropriate quality.
- The responsibility for the arrangement of the all equipment tools and plants etc. required for monitoring/analysis, videography, photography and presentation for the work lies on NEERI.
- GST and cess as applicable shall be paid as per rule. The Duration of the project is 12 Months.
- The progress report of the work should be submitted every 3 months. These reports shall be in the form of a booklet and soft copies along with videography and photography. Reports should be in line with the scope of work.
- BCCL shall not have any liability in case of any accident etc. towards CSIR-National Environmental Engineering Research Institute (NEERI)'s personnel/ staffs during filed visits
- Child labour is prohibited under Mines Act, therefore, NEERI Nagpur shall not deploy any child labour in the aforesaid work.

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- Reports /findings shall be sole property of BCCL and hence the publishing of the reports /findings in any forum (i.e. hard copy / electronic or in any other form) shall be done only with prior permission of BCCL and shall acknowledge BCCL in all such activities.
- Matter relating to any dispute or difference arising out of this work order and subsequent contract awarded based on this work order shall be subject to the jurisdiction of Dhanbad court only
- All other terms and conditions of the MoU executed between CIL and CSIR-National Environmental Engineering Research Institute (NEERI) on 03.12.2015 and extended to its subsidiaries shall be applicable.

4. ARBITRATION:

Disputes between the parties arising from this agreement shall be settled amicably through negotiations in good faith. Failing the above, the dispute shall be referred to arbitration of three arbitrators one each to be appointed by each party and the two arbitrator shall appoint a third arbitrator in accordance with the provisions of Arbitration and Conciliation Act, 1996 or any subsequent *amendment* thereof. The decision of the three arbitrators shall be final and binding on the parties hereto. The place of arbitration shall be at Nagpur and shall be conducted in English language

5. FORCE MAJEURE :

Force majeure is herein defined as any cause which is beyond the reasonable control of BCCL or CSIR/NEERI as the case may be, which with a reasonable amount of diligence could not have been foreseen and which substantially affects the performance of the respective obligations of the parties, such as but not limited to :

- Act of God such as flood, drought cyclone, lightning, earthquake, etc.
- Rebellion, civil mutiny, commotion, riot, accident by fire, explosion, epidemic, or any other cause beyond the control of parties.
- Acts of any Government including but not limited to war, declared or undeclared priorities, quarantines.
- Any direction, order of any court or Authority adversely affecting the enforcement of this agreement in any manner.
- Strikes and Lockouts for a continuous period of 30 days

Provided that either party shall within 7 days from the occurrence or cessation of such a cause notify the other in writing of the same.

In the event Force Majeure event continue for more than 30 days, the parties shall mutually discuss and decide the future course of action. If not mutually agreed, the parties shall have the right to terminate this agreement.

BCCL or NEERI shall not be liable for non-performance of their respective obligations or delays in respect thereof as a result of force majeure as referred to and / or defined above

6. INDEMNITY

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- BCCL shall indemnify and keep indemnified CSIR/NEERI from and against any and all loss damage or liability (whether criminal or civil) suffered and legal fees and costs incurred by CSIR/NEERI resulting from a breach of any of this agreement between BCCL and its licensors/consultants/contractors or any other third party.
- Notwithstanding anything in this agreement, in the event of any liability, claim or damage arising out of this agreement, the liability of CSIR/NEERI to BCCL shall under any circumstance exceed the amount received by CSIR-NEERI

7. CONFIDENTIALITY

The Parties, to the extent of their respective rights to do so, shall exchange such technical information and data as is reasonably required of each Party to perform its responsibilities under this agreement. Each Party agrees to keep in confidence and to use the same degree of care as it uses with respect to its own proprietary data to prevent the disclosure to third Parties of all technical information, data and confidential business information (hereinafter referred to as "Consolidated Data"). Exchange, use and maintenance of Confidential Data shall be mutually discussed and agreed to by the parties. The preceding provisions of confidentiality and restriction on use of Consolidated Data shall not apply to

- Information in the public domain or information, which subsequently enter into public domain without committing breach of this Article.
- Information in possession of the Party at the time of disclosure and was not acquired, directly or indirectly, from the other Party.
- Information, which a Party requires to disclose under law, rules or regulations or court orders.
- Information provided to Consultants / advisors, provided they, in turn, sign undertaking of confidentiality

8. OWNERSHIP OF INTELLECTUAL PROPERTY -

- Any intellectual property rights obtained by the respective parties hereto pertaining to the PROJECT prior to signing of the agreement shall remain the property of the respective organizations. On mutual consent foreground IP shall be deployed for the project purpose.
- The intellectual property that is generated in the PROJECT shall be owned by BCCL.
- If an IP is generated the relevant IP clause shall be built in a project specific agreement mutually, as the case arises.
- In the case of Intellectual Property developed independently by CSIR/NEERI in which BCCL has an interest, CSIR/NEERI shall grant to BCCL/CIL a non-exclusive license to manufacture and sell the product, and CSIR/NEERI reserves the right to grant similar license at its discretion to others.
- During the work as envisaged under this agreement in the event of CSIR/NEERI scientists exploring, inventing, or discovering results other than the specific objectives of the Project, CSIR/NEERI shall retain absolute rights on such results. CSIR/NEERI shall first offer such results to BCCL on negotiated terms by entering into a separate Agreement. In case BCCL does not accept the offer, CSIR/NEERI shall be free to negotiate the release of such results to other parties without any obligations to CIL.

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- In case BCCL intends to renounce its interest in the Project, it shall give notice to NEERI of its intention upon receipt of which notice NEERI shall be free to work further on its own on such Projects and or enter into a licensing or joint development Agreement with any other interested third party.

9. Deliverables:

- Emission Inventory and Dispersion Modeling
- Source apportionment for identification of sources impact and prioritization of actions.
- Time-bound action plan guidelines for implementing measures for improving air quality
- 2 copies of Draft Report
- 15 copies of Final Report- Since the Environment Clearance has been granted to mines of BCCL on Cluster Basis, the final reports must be submitted to BCCL on Cluster Basis.

10. TERMS OF PAYMENT

Project Cost	Rs. 120 Lakhs (Rupees One Crore Twenty Lakhs Only)
GST @18%	Rs. 21.6 Lakhs (Rupees Twenty One Lakhs Sixty Thousand Only)
Total Cost (including GST)	Rs. 141.6 Lakhs (Rupees One Crore Forty One Lakhs Sixty Thousand Only)
Payment Terms	1st Installment: 50% + GST + All applicable Cess & surcharges – (After identification of stations in Jharia Coalfield and submission of its report) 2nd Installment: 30% + GST + All applicable Cess & surcharges – (After completion of field data collection) 3rd & Final Installment: 20% + GST + All applicable Cess & surcharges – (After submission of final report and its acceptance by BCCL.)
Project Duration	12 months

- All the payment will be made by ELECTRONIC MODE through bank. The CSIR-National Environmental Engineering Research Institute (NEERI) must furnish the details in the proforma as given in the Annexure-3.

11. PERFORMANCE SECURITY/SECURITY DEPOSIT

11.1 Security Deposit shall consist of two parts:

a) Performance Security to be submitted at award of work and

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b) Retention Money to be recovered from running bills.

The security deposit shall bear no interest.

11.2 Performance Security should be 5% of annualized value of contract amount and should be submitted within 28 days of issue of this term of reference by NEERI in any of the form given below

- A Bank Guarantee in the form given in the bid document from any scheduled Bank payable at its Branch at Dhanbad.

- Govt. Securities, FDR (Scheduled Bank) or any other form of deposit stipulated by the owner.

- Demand Draft drawn in favour of Bharat Coking Coal Limited on any Scheduled Bank payable at its Branch at Dhanbad.

If performance security is provided by NEERI in the form of bank guarantee it shall be issued either –

(a) at Bidder's option by a Scheduled Bank payable at its branch at Dhanbad, or

(b) by a foreign bank located in India and acceptable to the employer.

(c) the validity of the Bank Guarantee shall be for a period of one year or ninety days beyond the period of contract or extended period of contract (if any), whichever is more.

Failure on the part of NEERI to comply with the requirement as above shall constitute sufficient ground for cancellation of this agreement.

11.3 All bills shall be paid at 95%. The balance 5% shall be treated as retention Money and will be second part of security deposit.

11.4 Refund of Security Deposit:

The refund of security deposit shall be subject to company's right to deduct/appropriate its dues against the NEERI under this terms of reference/any other works. On completion of the work and certified as such by the Project-in-Charge *i.e* HOD(Env) or his authorized representative, the security deposit remaining with the company shall be refunded as below:

- Performance Security (1st part of security deposit) shall be refunded within 60 days of the submission of final report and its acceptance by BCCL management (As certified by the Project-in-charge *i.e* HOD(Env) or his authorized representative)
- Retention Money (2nd part of security deposit) shall be refunded after 180 days of the submission of final report and its acceptance by BCCL management (As certified by the Project-in-charge *i.e* HOD(Env) or his authorized representative.)

You are advised to furnish Performance Security/Security Deposit in the Office of HoD (Env), BCCL in the form detailed as under within 28 (twenty eight) days from the date of receipt of this terms of reference to enable the HoD (Env), BCCL to issue a formal work order to you and sign the contract/agreement executed between the company and you (NEERI, Nagpur) with the terms and conditions including, Integrity Pact, etc.

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No. of the Independent External Monitor(s) for this purpose is as given below:

1. Name: Prof (Dr.) L.C. Singhi, IAS (Retd.)

Address: L-31, Third Floor, Kailash Colony, New Delhi-110048

2. Name: Shri Pramod Deepak Sudhakar, IAS (Retd.)

Address: A-002, Stellar Park Apartments, C-58/24 Sector-62, Noida-201301

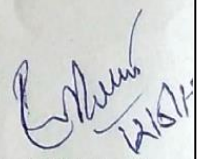
This terms of reference is given to you in duplicate. You are advised to submit your consent by returning second copy of the terms of referenceduly signed by you as a token of acceptance of the award within 7(seven) days from the date of receipt of this letter.

Failure to comply with the requirement as above shall constitute sufficient ground for cancellation of the award.

Enclosed:

1. Annexure-1 (Proforma of bank guarantee for performance security)
2. Annexure-2 FORMAT FOR CONTRACT AGREEMENT
3. Annexure -3 (Proforma for collecting payment through electronic mode including electronic fund transfer (ETF) & electronic clearing system (ECS))
4. Annexure -4 INTEGRITY PACT

Yours faithfully,



Dy. GM (Env.)

Copy to:

- 1) TS to D (T) OP/ D (F)/ D (T) P&P for kind information
- 2) ES to CVO, BCCL for kind information
- 3) TS to CMD, BCCL for kind information
- 4) GM (Finance) I/C, BCCL, Koyla Bhawan
- 5) HOD(Fin)Pay.
- 6) GM(Env.), CIL for kind information
- 7) Prof (Dr.) L.C Singhi, IAS (Retd.), L-31 Third Floor, Kailash Colony, New Delhi-1100481. Address:
L-31, Third Floor, Kailash Colony, New Delhi-110048.
- 8) Concerned Fille.

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Annexure-VI

<p>भारत कोकिंग कोल लिमिटेड एक मिनीरत्न कंपनी (कोल इंडिया लिमिटेड का एक अंग) पंजीकृत कार्यालय कोयला भवन, कोयला नगर, (धनबाद) झारखंड 826005 CIN: U10101JH1972GOI000918 Tele: 0326 2230174 FAX: 0326 2230176 ईमेल : cgmsafety@bccl.gov.in</p>		<p>Bharat Coking Coal Limited A Miniratna Company (A subsidiary of Coal India Ltd) Office of GM I/C(S&R) Koyla Bhawan, Koyla Nagar, Dhanbad, Jharkhand-826005 CIN: U10101JH1972GOI000918 Tele: 0326 2230174 FAX: 0326 2230176 Email: cgmsafety@bccl.gov.in</p>
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पत्र संख्या भाकोकोलि/उप महाप्रबंधक(एस&आर)/C/संचिका-MP/17 323

दिनांक:-07.04.2017

To,
Dr, Vinod Kumar,
Group Head, Geosciences group
National Remote Sensing Center
India Space Research Organization
Dept of Space, Govt of India,
Balanagar, Hyderabad - 500037

Sub:- Work –Order for “ Delineation of Surface Coal Fire and associated Land Subsidence
in Jharia Coalfield, Jharkhand using satellite based remote – sensing techniques”

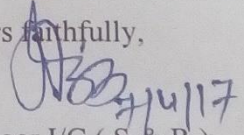
Dear Sir,

Consequent upon competent approval of proposal on aforesaid subject and subsequent signing of MOU between BCCL and NRSC, the aforesaid work is awarded to NRSC for Rs.18,10,500/- (Eighteen lac ten thousand five hundred) only, against 100% payment in advance subject to terms and conditions listed in MOU. As per agreed payment terms and Demand Note No. 07/2016-17,

You are therefore requested to initiate all necessary activities for commencing the subject work as early as possible.

Thanking you,

Yours faithfully,


General Manager I/C (S & R)

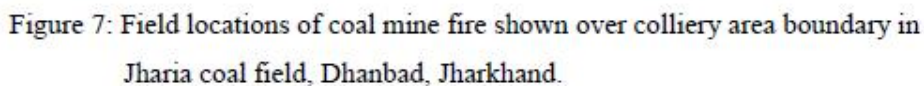
Cc to :

1. Director (T) P&P, BCCL- for kind information.
2. TS to CMD, BCCL – for kind information.
- ✓ 3. Sri Mithilesh Kumar, Sr.Mgr.(M), Safety.Deptt., KoylaBhawan

**DELINEATION OF SURFACE COAL FIRE IN
THE JHARIA COALFIELD, DHANBAD,
JHARKHAND USING REMOTE SENSING DATA**

**GEOSCIENCES GROUP
RS & GIS APPLICATIONS AREA
NATIONAL REMOTE SENSING CENTRE
INDIAN SPACE RESEARCH ORGANISATION
DEPT. OF SPACE, GOVT. OF INDIA
HYDERABAD-500 037
MARCH, 2014**



Period: October 2017 to March 2018

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Period: October 2017 to March 2018

NRSC/RSA/GSD/BCCL/Project Report/April2014

5. There is a decrease in areal extent of the fire (Figure 10) from 2006 to 2012.

Note: Estimations of fire extent (in terms of sq.km.) both in 2006 and in the present 2012 study are pixel based. They do not represent the actual ground area under fire. These estimations are made for comparative purpose only, to indicate the increase or decrease of areal disposition of fire. Hence, they should not be quoted as fire area on the ground.

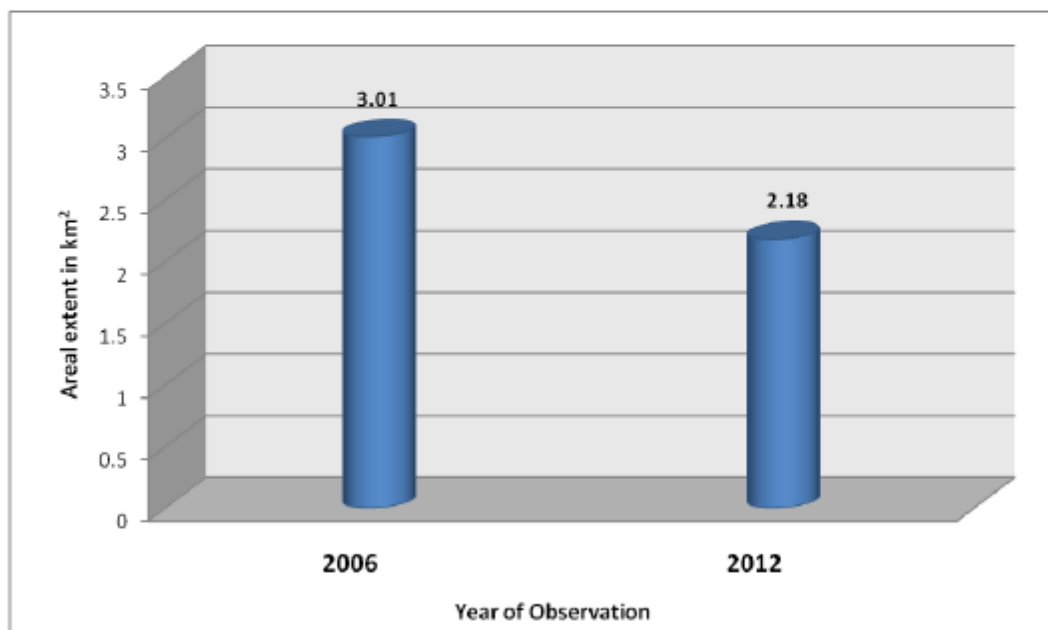


Figure 10: Total fire area statistics

Memorandum of Understanding

for

Utilization of mine water by villages situated near mines of CIL in command area of Central Coalfields Limited, Bharat Coking Coal Limited and Eastern Coalfields Limited in the State of Jharkhand

This Memorandum of Understanding "MoU" ("Agreement") is made on 30th day of October 2017 at Ranchi

By and Between

Government of Jharkhand (hereinafter referred to as "GoJ"), represented through Department of Industries, Mines & Geology and Department of Drinking Water & Sanitation, Government of Jharkhand having its office at Ranchi which expression shall, unless the context otherwise requires, includes its successors and assignees of the FIRST PART;

And

Coal India Limited (hereinafter referred to as "CIL"), a Government of India Enterprise having its Registered Office at Coal Bhawan, Premise No-04 MAR, Plot No- AF-III, Action Area- 1A, Newtown, Rajarhat, Kolkata-700156 and represented by General Manager, Corporate Social Responsibility, which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors, and permitted assignees of the SECOND PART;

The expressions GoJ and CIL shall hereinafter, as the context may admit or require, be individually referred to as the 'The Party' and collectively as 'the Parties'.

Whereas:

- A.** The Government of Jharkhand (GoJ) and Coal India Limited (CIL), both parties have agreed in principle to the objective of achieving the common goal of providing surplus water from suitable mines for use by habitations, located in the command area of subsidiaries of CIL in the state of Jharkhand for their various needs. These subsidiaries are Central Coalfields Limited (CCL), Bharat Coking Coal Limited (BCCL) and Eastern Coalfields Limited (ECL).
- B.** Mine water available in mine voids and from mine discharge in Central Coalfields Limited (CCL), Bharat Coking Coal Limited (BCCL) and Eastern Coalfields Limited (ECL), subsidiaries of CIL, are presently supplied to several colonies of these subsidiary companies of CIL. At some places mine water is drawn by Department of Drinking Water & Sanitation and other agencies/organizations of Government of Jharkhand. Surplus mine water available at other mines can be used by surrounding habitations for their various needs.
- C.** Presently, about 25250 million gallon of water is estimated to be available in 88 opencast mine voids of CCL, and about 31million gallon/ day of water is estimated to be available as surplus/excess mine water discharge at 23 mine sites of BCCL and 07mine sites of ECL in State of Jharkhand . The list of mines where water is available in mine voids in CCL and in mine water discharge in BCCL and ECL are enclosed at **Annexure I, Annexure II, and Annexure III respectively.**

D. The Parties hereby agree, undertake and affirm as under:-

- i. That sampling and analysis of quality of water available at various mine sites (voids or mine discharge), to assess the suitability for potability, agricultural or other uses will be done by a third party having a recognized environmental laboratory and the party will be selected by mutual consent between CIL (represented by its subsidiaries - CCL, BCCL and ECL) and GoJ.
- ii. The report of analysis of quality of water of various mine sites will be submitted by the selected third party to GoJ and CIL (represented by its subsidiaries - CCL, BCCL and ECL).
- iii. That cost of sampling and analysis of quality of water of various mine sites will be borne by CIL (represented by its subsidiaries - CCL, BCCL and ECL).
- iv. That CIL (represented by its subsidiaries CCL, BCCL and ECL) shall bear all initial cost for construction of civil works like foundation, platform and shed for installation of motor and pumps for drawal of water at identified mine sites.
- v. That Government of Jharkhand shall bear the cost of pumps, motors, associated power supply, pipelines and their installation at identified mine sites from where water is to be drawn. The cost of running these facilities would be borne by Government of Jharkhand or community benefitted.
- vi. The construction, operation and maintenance cost for treatment and distribution facilities of water from identified mine sites will be borne by GoJ.

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- vii. The list of mine sites where water is available in voids or as mine discharge are placed at **Annexure I, Annexure II, and Annexure III** for **CCL, BCCL, and ECL** respectively. The number of mine sites may increase / decrease in future. So modalities for pumping water from the additional sites will be same as laid down at serial no D (i) to D (vi).
- viii. In case of dispute, the matter shall be mutually resolved and either party will not be held responsible for non discharge of responsibility under this agreement.
- ix. In case of force majeure or an Act of God, preventing the parties from fulfilling part or all the obligations, both parties shall be exonerated from carrying out further action as per MoU until the force majeure no longer exists.
- x. The MoU will be in force for 30 (thirty) years. The MoU may be renewed as mutually agreed upon by CIL (represented by its subsidiaries CCL, BCCL and ECL) and GoJ beyond the mentioned period of MoU.

Provided further that in case dewatering is required to start coal production in national interest from these mines then the parties will sit together and mutually decide modalities for the same.
- xi. The sustainability of mine sites in respect of future availability of water will be assessed/ studied by CIL.
- xii. This MoU shall be in accordance with applicable Acts, Rules and Guidelines for coal mining including mine closure guidelines and shall not be in contravention with provisions made therein.

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

IN WITNESS THEREOF, both parties hereto have signed this MoU
in two original copies in English on the date indicated above.

For Coal India Limited

For Government of Jharkhand

Department of Industries, Mines &
Geology

1. Siddh Nath Singh, General
Manager, CSR,
Coal India Limited

1. Aboobacker Siddique P., I.A.S.
Mines Commissioner,
Mines & Geology Department,
Government of Jharkhand.

(.....)

(.....)

Drinking Water & Sanitation
Department

2. Ramesh Kumar,
Engineer in Chief,
Drinking Water & Sanitation
Department, Government of
Jharkhand.

(.....)

Witness 1 (Soumitra Singh)

Witness 1

30/10/18
(Ajay Nath Singh)

Witness 2

Witness 2



**GROUNDWATER LEVEL & QUALITY REPORT
FOR CLUSTER OF MINES, BCCL**

(Assessment year - 2017)

[CLUSTER – I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XIII, XIV, XV & XVI of Mines, BCCL]

JHARIA COALFIELD AND RANIGANJ COALFIELD (PART)

For

(BHARAT COKING COAL LIMITED)

(A Subsidiary of Coal India Limited)

KOYLA BHAWAN (DHANBAD)

MARCH – 2018

Prepared by

Hydrogeology Department

Exploration Division

CMPDI (HQ), Ranchi

3.3 H Monitoring of Ground Water Levels of Cluster-VIII

Cluster-VIII consists of ten mines namely; Bastacolla mixed mines (OC & UG), Bera mixed mines (OC & UG), Dobari UG, Kuya mixed (OC & UG), proposed Goluckdih (NC) OC, Ghanoodih OC and Kujama OC under the administrative control of Bastacolla Area of BCCL. This Cluster of mines is located in eastern part of Jharia Coalfield in Dhanbad district of Jharkhand.

The present leasehold area of Cluster-VIII is 1200.41 Ha. The area has a general undulating topography with general slope towards south and south-west. The ground elevation in the area ranges from 175 m to 221 m AMSL. Chatkari Jore, Tisra Jore and its tributaries controlling the drainage pattern of the area. The area comes under the watershed of Chatkari Jore.

4 hydrograph stations (**D-8, D-43, D-49 and D-51**) are located in the core zone of the mine area. Water level monitoring in these monitoring stations has been done in the months of February, April, August & November'2017 and the Ground water level data is enclosed in the table below:

Sl No.	Well No.	Location	Water level (bgl in meters)			
			Feb'17	Apr'17	Aug'17	Nov'17
1	D-8	Alokdiha	4.45	5.15	2.35	1.85
2	D-43	Alagdih	2.85	7.50	2.75	3.60
3	D-49	Galucdih	2.25	2.70	1.48	2.05
4	D-51	Chankuiya	9.05	10.45	5.07	5.43
Average WL (bgl)			4.65	6.45	2.91	3.23

Ground Water Level (in bgl) varies from 2.25 to 9.05 m during February, 2.70 to 10.45 m during April, 1.48 to 5.07 m during August and 1.85 to 5.43 m during November within the Core Zone of Cluster-VIII area.

4.0 GROUNDWATER LEVEL SCENARIO

During the month of February'2017 the depth to water level (in bgl) within 15 nos Cluster of mines varies from 0.10 m to 10.68 m with an average varies from of 1.32 m to 5.23 m. During the month of April'2017 the depth to water level varies from 0.67 m to 16.28 m with an average varies from 2.51 m to 9.26 m. During the month of August'2017 the depth to water level varies from 0.20 m to 5.17 m with an average varies from 0.43 m to 2.91 m. During the month of November'2017 the depth to water level varies from 0.15 m to 6.97 m with an average varies from 1.23 m to 3.51 m. The summarized water level data of all clusters are given in **Table No – 4**.

Depth to water level (in bgl) values described that water level goes down to maximum 16.68 m during pre-monsoon'2017 and maximum upto 6.97 m during post-monsoon'2017. Un-confined aquifer is affected around 20 m to 30 m maximum close to active opencast mining areas, showing steep gradient towards mine void. Other than that, there is no mining effect in the water level within JCF area and RCF area (part). Historical water level data and hydrograph of permanent observation stations from CGWB shown in **Annexure–III**.

Monitoring groundwater (quantity & quality) to assess the present condition and resource has been done regularly in the coalfield areas. Well hydrographs (**Annexure–III**) are prepared and studied to identify potentially adverse trends so that appropriate action can be taken to protect groundwater resource. According to the hydrograph trend analysis of CGWB monitoring wells, no significant decline trend of water level is noticed in any particular area for the last 10 years within the coalfield area. Regarding quality monitoring, the water sample location map (**Figure No–2**) with collection points details (dug wells) are given in **Annexure–IV**. Locations of proposed Piezometers to monitor deeper aquifers in and around active coal mining area in JCF and RCF (part) is given in **Figure No–3**.

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines**EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013****Period: October 2017 to March 2018**

CMPDI

Table No-4: Groundwater level data Cluster-wise

Sl. No.	Cluster of BCCL	No. of Monitoring Wells	Water level fluctuation Below ground level (Feb, Apr, Aug & Nov'17)	Formation
1	I	4 nos.	0.15 to 10.00 m	Barakar
2	II	5 nos.	0.60 to 13.23 m	Barakar
3	III	5 nos.	0.55 to 6.38 m	Barakar
4	IV	5 nos.	0.75 to 9.05 m	Barakar
5	V	4 nos.	0.27 to 3.65 m	Barakar
6	VI	2 nos.	0.10 to 4.40 m	Barakar
7	VII	6 nos.	0.35 to 8.86 m	Barakar
8	VIII	4 nos.	1.48 to 10.45 m	Barakar
9	IX	6 nos.	0.75 to 9.25 m	Barakar
10	X	4 nos.	0.40 to 8.80 m	Barakar
11	XI	5 nos.	0.55 to 12.45 m	Barakar & Barren Measure
12	XIII	5 nos.	0.20 to 11.87 m	Raniganj
13	XIV	3 nos.	1.04 to 10.03 m	Raniganj
14	XV	4 nos.	0.62 to 16.28 m	Barakar & Barren Measure
15	XVI	4 nos.	0.80 to 5.80 m	Barakar

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

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Period: October 2017 to March 2018

CMPDI

Table No-6: Cluster-wise Groundwater development scenario

Cluster/ Area	Adminis- trative Blocks/Stage Of GW Develo- pment (SOD)	Total Water demand (cum/day)				Avg. GW level (bgl in m) 2017		GW level declining trend 2005-2017		Remarks
		Mine Discharge	Surface Water Source	Total Use (Domestic +Industrial +Others)	Excess Or other use	Pre- monsoon	Post- monsoon	Pre- monsoon	Post- monsoon	
Cluster-I	Bermo (SOD: Over- exploited)	2950	NIL	2123	827	5.21	2.57	NO	NO	-
Cluster-II	Baghmara	8350	Jamunia river	7265	1085	6.34	2.12	NO	NO	-
Cluster-III	(SOD: Critical)	10,960	NIL	7290	3670	5.90	2.01	NO	NO	-
Cluster-IV		5900	MADA (Damodar river)	5900	NIL	4.97	1.55	NO	NO	
Cluster-V		11,025	MADA	9214	1811	2.51	1.80	YES	NO	Excess water stored into abandoned UG
Cluster-VI	Dhanbad	4150	MADA (Damodar river)	4150	NIL	3.40	1.23	YES	YES	Artificial recharge structure needed
Cluster-VII	(SOD: Over- exploited)	14,920	MADA	14,639	281	3.30	2.00	NO	NO	
Cluster-VIII	Jharia	9320	MADA	5474	3846	6.45	3.23	NO	NO	Excess water stored into abandoned UG & FF
Cluster-IX	(SOD: Over- exploited)	12,980	MADA	9714	3266	5.40	3.21	NO	NO	Excess water stored into abandoned UG & FF
Cluster-X		11,825	Damodar river	6525	5300	5.74	2.91	YES	NO	Excess water stored into abandoned UG & OC
Cluster-XI	Dhanbad	31,530	MADA & DVC	18,825	12,705	4.72	2.20	NO	YES	Excess water used F.P
Cluster-XIII	Baghmara	4774	Damodar river	4115	659	7.22	3.51	NO	NO	-
Cluster-XIV	(SOD: Critical)	2600	DVC	1875	725	9.26	2.77	NO	NO	
Cluster-XV		6200	Jamunia river	4147 +1800 (ponds)	253	8.60	2.60	NO	YES	Excess water store in surface waterbodies
Cluster-XVI	Nirsa (SOD:Safe)	3380	DVC (Barakar river)	2450	930	3.25	2.47	NO	NO	

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Annexure-IX

Transportation Plan for Conveyor



cmpdi
A Mini Ratna Company

सेंट्रल माईन प्लानिंग एण्ड डिजाइन इंस्टीट्यूट लिमिटेड
(कोल इंडिया लिमिटेड की अनुबंधी कम्पनी / भारत सरकार की एक लोक उपक्रम)
पंजीकृत कार्यालय : गोंदवाना प्लेस , कान्के रोड , राँची - 834031 (झारखण्ड) भारत
क्षेत्रीय संस्थान-2, पत्रा. बीसीसीएल टाउनशीप, कोयला नगर, धनबाद 826005 (झारखण्ड) भारत
Central Mine Planning & Design Institute Limited
(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)
Registered Office : Gondwana Place, Kanke Road, Ranchi -834031(Jharkhand)
Regional Institute-II, P.O. BCCL Township, Koylanagar, Dhanbad 826005(Jharkhand) India
Corporate Identity No. U14292JH1975GOI001223

पत्रांक: आर.आई.-2/पर्यावरण/एम-30/1150

दिनांक: 20.06.2015

सेवा में,
उप महाप्रबंधक (पर्यावरण)
बी. सी. सी. एल.
कोयला भवन
धनबाद।



विषय: Study of installation of Rail-cum-Conveyor System in BCCL for transportation of coal.

महोदय,

This has reference to your letter no. BCCL/GM(Env.)/F-EC/13/622, dated 25.05.2013 for conducting the study and preparation of plan for installation of Rail-cum-Conveyor System for coal transportation in BCCL as a part of compliance of environmental clearance (EC) conditions stipulated by MoEF & CC in EC orders of different clusters. In this regard, we would like to inform you the following:

- As per EC clearance order transportation plan for Rail-cum-Conveyor system should dovetailed with Jharia Action Plan (Master Plan). The system of transportation is required to be installed in 2nd phase of EC implementation i.e. after completion of Master Plan (10 years) and 5 years of gestation period.
- JRDA has issued direction to RITES for traffic survey and data collection to initiate feasibility study regarding Diversion of Railway lines from fire affected and subsidence prone areas
- Coal transportation route / conveyor installation layout will be finalized after liquidation of coal mine fire, rehabilitation of 595 unstable sites, road and rail route alignment and location of Rly. Sidings of BCCL.

CMPDI will be able to submit the plan / study for installation of Rail-cum-Conveyor System in BCCL for transportation of coal only after diversions and re-alignments of roads and railway lines and relocation of railway sidings

This is for your kind information.

Sd/- Amananthu S.B.
For compliance purpose.

[Signature]
23/6/15

भवदीय

(वि. कु. सिन्हा)
क्षेत्रीय निदेशक



☎ : (+91) 0326-2230850

फैक्स / Fax : (+91) 0326-2230500

वेब साइट / Website : www.cmpdi.co.in

ईमेल / Email : ri2@cmpdi.co.in

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

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Annexure-X

R&R of PAFs

Sl. No.	Name of Colliery	No of PAFs Rehabilitated/Shifted till date
1	Bastacolla Colliery	Nil
2	Bera Colliery	Nil
3	Dobari Colliery	121
4	Ghanoodih Colliery	571
5	Kuya Colliery	304
6	Kujama Colliery	148
Total		1144

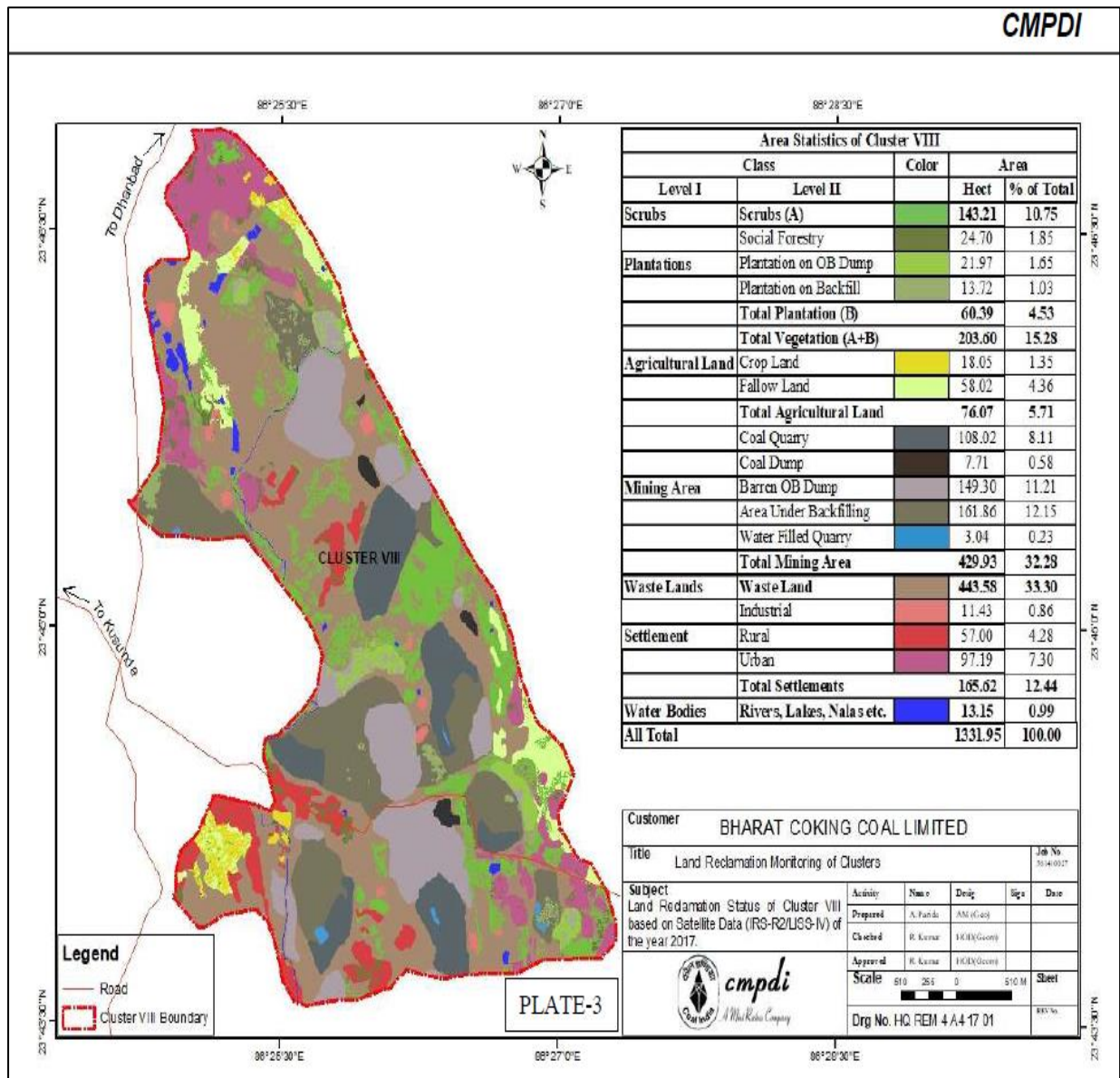
Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Annexure-XI

Landuse Map generated from Remote Sensing Data





BHARAT COKING COAL LIMITED
(A Subsidiary of Coal India Limited – A Maharatna Company)

CORPORATE ENVIRONMENTAL POLICY

Bharat Coking Coal Limited (BCCL), a subsidiary of Coal India Limited, is a Public Sector Undertaking engaged in mining of coal and allied activities. It is the only producer of Prime Coking Coal in India. BCCL was incorporated in 1972 to operate coking coal mines operating in the Jharia and Raniganj Coalfields. Currently, the Company operates 66 coal mines and 8 Coal Washeries.

Our mission is to produce the planned quantity of coal efficiently and economically with due regard to safety, conservation and quality. BCCL affirms its commitment for environment friendly mining with right mitigation of pollution, reclamation of the degraded land, preservation of biodiversity and proper disposal of waste following the best environmental practices including judicious use of the non-renewable energy on the path of continual improvement. Towards this commitment, BCCL shall endeavor to:

- ❖ Conduct mining and associated operations in an environmentally responsible manner to comply with applicable laws and other requirements related to environmental aspects.
- ❖ Design projects with due consideration of Sustainable Development by integrating sound environmental management practices in all our activities.
- ❖ Prevent pollution of surrounding habitation by continuous monitoring and adopting suitable measures for environment protection.
- ❖ Ensure compliance of all applicable Environmental and Forest Clearance conditions and other statutory conditions issued by regulatory agencies.
- ❖ Implement the Environmental Management Plans in all our mines effectively to mitigate pollutions on air, water and noise; proper disposal of wastes and reclamation and ecological restoration of degraded land; and by also dovetailing the Jharia action/ Master Plan for dealing with Fires, Subsidence and Rehabilitation of affected people with the Environmental Management Plans under the Cluster Concept.
- ❖ Strive to conserve Bio-Diversity through Ecological restoration methods.
- ❖ Conserve natural resources through recycling of wastes on the principle of Reduce, Recycle and Reuse. Put special thrusts on efficient energy utilization as a measure to reduce carbon foot-print.
- ❖ Strive for continual improvement in our environmental performances by setting targets, measuring progress and taking corrective action.
- ❖ Create environmental awareness among the employees and the local communities through pro-active communication and training and encourage our business associates to adopt similar approach for environmental protection.

Place: Dhanbad
Date: 25.5.12


Chairman-cum-Managing Director

Chairman-cum-Mg. Director
BHARAT COKING COAL LIMITED
Koyla Bhawan, Dhanbad-826 005

AMBIENT AIR QUALITY MONITORING

2.1 Location of sampling station and their rationale:

(As per G.S.R. 742 (E) dt. 25th December, 2000)

2.1.1 Ambient Air Quality Sampling Locations

I. CORE ZONE Monitoring Location

i) Dobari UGP (A11) : Industrial Area

The location of the sampling station is 23°45'50.00" N & 86°26' 1.00" E. The sampler was placed at Ground level of Safety Office.

II. BUFFER ZONE Monitoring Location

i) Jeenagora (A13) : Industrial Area

The location of the sampling station is 23° 42' 31.00" N & 86° 25' 48.00" E. The sampler was placed at a height of 1.5 m from the ground level at the Safety Office.

ii) Hurriladih UGP (A28) : Industrial Area

The location of the sampling station is 23°44' 4.18" N & 86° 24' 6.21" E. The sampler was placed at a height of 1.5 m from the ground level of the mine office.

iii) Kusmatand Village (A12): Industrial Area

The location of the sampling station is 23°45' 4.65" N & 86° 26' 42.10" E. The sampler was placed at a height of 1.5 m from the ground level of the village.

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

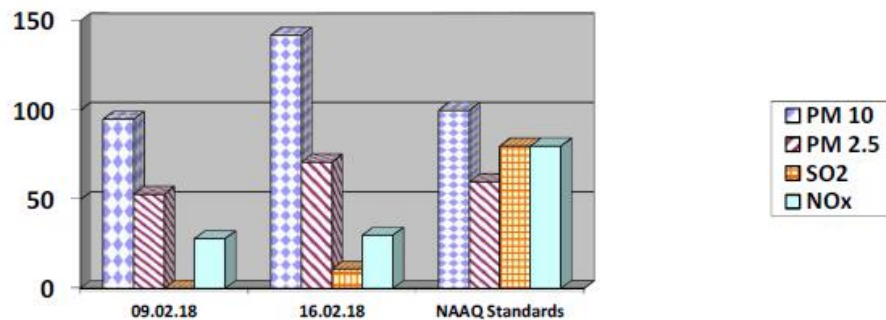
Period: October 2017 to March 2018

AMBIENT AIR QUALITY DATA

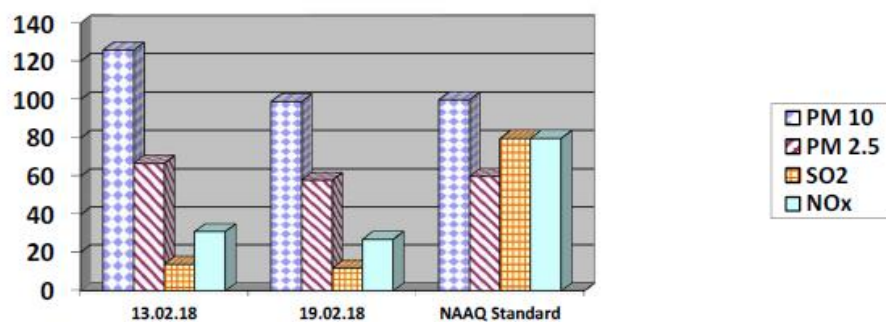
Cluster-VIII, Bharat Coking Coal limited Month:Feb- 2018

Year: 2017-18.

Station Name: Dobari UGP (A11)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	09.02.18	95	53	<10.0	28
2	16.02.18	142	71	11	30
	NAAQ Standards	100	60	80	80



Station Name: A13 – Jeenagora		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	13.02.18	126	67	14	31
2	19.02.18	99	58	12	27
	NAAQ Standard	100	60	80	80



Analysed By
JSA/SA/SSA

Checked By
Lab In Charge
RI-2, CMPDI, Dhanbad

Approved By
HOD(Mining/Environment)
RI-2, CMPDI, Dhanbad

JOB NO. 200316028

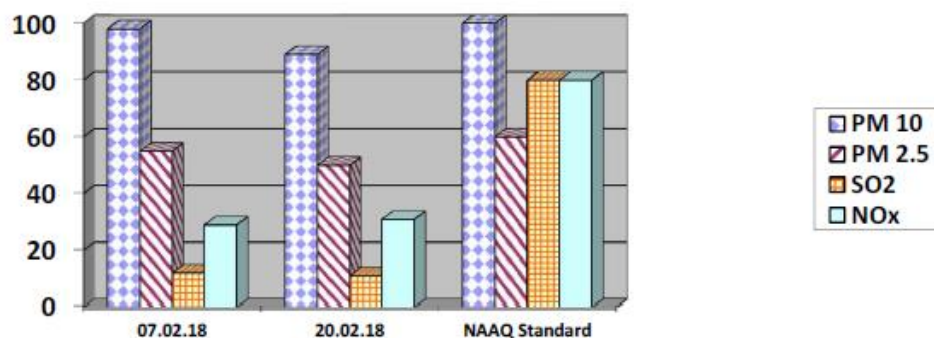
Cluster –VIII, BCCL Environmental Monitoring Report

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

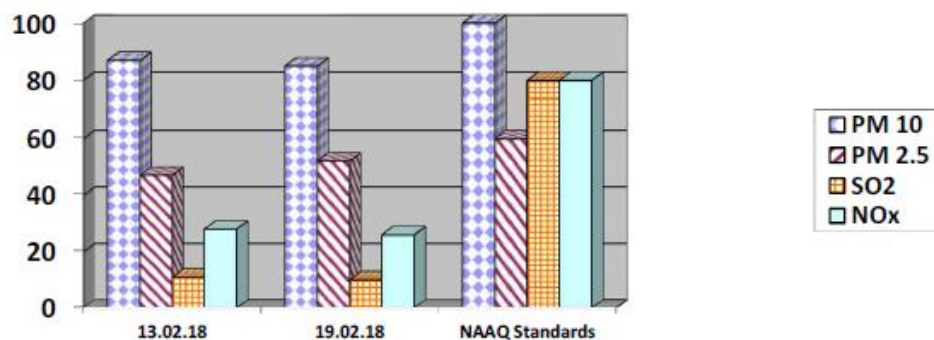
EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Station Name: Hurriladih UGP (A28)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	07.02.18	98	55	12	29
2	20.02.18	89	50	11	31
	NAAQ Standard	100	60	80	80



StationName:A12 Kusmatand Village		Zone: Buffer		Category: Residential	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	13.02.18	87	47	11	28
2	19.02.18	85	52	<10.0	26
	NAAQ Standards	100	60	80	80



- All values are expressed in microgram per cubic meter.
- 24 hours duration

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Analysed By
JSA/SA/SSA

✓
Checked By
Lab In Charge
RI-2, CMPDI, Dhanbad

21/02/18
Approved By
HOD(Mining/Environment)
RI-2, CMPDI, Dhanbad

JOB NO. 200316028

Cluster –VIII, BCCL Environmental Monitoring Report

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Ambient Air Quality Standards for Jharia Coal Field As per the Environment (Protection) Amendment Rules, 2000 notified vide notification G.S.R. 742(E), dated 25.9.2000.

Category	Pollutant	Time weighted average	Concentration in Ambient Air	Method of Measurement
1	2	3	4	5
III Coal mines located in the coal fields of <ul style="list-style-type: none"> • Jharia • Raniganj • Bokaro 	Suspended Particulate Matter (SPM)	Annual Average * 24 hours **	500 $\mu\text{g}/\text{m}^3$ 700 $\mu\text{g}/\text{m}^3$	- High Volume Sampling (Average flow rate not less than 1.1
	Respirable Particulate Matter (size less than 10 μm) (RPM)	Annual Average * 24 hours **	250 $\mu\text{g}/\text{m}^3$ 300 $\mu\text{g}/\text{m}^3$	Respirable Particulate Matter sampling and analysis
	Sulphur Dioxide (SO_2)	Annual Average * 24 hours **	80 $\mu\text{g}/\text{m}^3$ 120 $\mu\text{g}/\text{m}^3$	1.Improvedwest and Gaeke method 2.Ultraviolet fluorescene
	Oxide of Nitrogen as NO_2	Annual Average * 24 hours **	80 $\mu\text{g}/\text{m}^3$ 120 $\mu\text{g}/\text{m}^3$	1. Jacob & Hochheiser Modified (Na-Arsenic) Method 2. Gas phase Chemilumine-scence

Note:

* Annual Arithmetic mean for the measurements taken in a year, following the guidelines for frequency of sampling laid down in clause2.

** 24hourly/8hourlyvalueshallbemets92%ofthetimeinayear.However,8% of the time it may exceed but not on two consecutivedays.

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Annexure-IV

Noise Monitoring Data

10

NOISE LEVEL QUALITY MONITORING

4.1 Location of sampling sites

1. Dobari UGP (N11)
2. Jeenagora (N13)
3. Hurriladih UGP (N28)
4. Kusmatand Village (N12)

Methodology of sampling and analysis

Noise level measurements in form of 'Leq' were taken using Integrated Data Logging Sound Level Meter (NL-52 OF RION CO. Ltd. Make) during day time. Noise levels were measured for about one hour time in day time. Noise levels were measured in Decibels, 'A' weighted average, i.e. dB (A).

4.2 Results & Interpretations

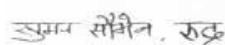
Ambient noise levels were recorded during day time and the observed values were compared with standards prescribed by MoEF&CC. The results of Noise levels recorded during day time on fortnightly basis are presented in tabular form along with the applicable standard permissible limits. The observed values in terms of Leq are presented. The observed values at all the monitoring locations are found to be within permissible limits.

NOISE LEVEL DATA

Name of the Project: Cluster -VIII			Month: February, 2018		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Dobari UGP (N11)	Industrial area	09.02.18	62.6	75
2	Dobari UGP (N11)	Industrial area	16.02.18	60.9	75
3	Kusmatand Village (N12)	Residential area	13.02.18	51.7	55
4	Kusmatand Village (N12)	Residential area	19.02.18	50.6	55
5	Jeenagora (N13)	Industrial area	13.02.18	63.6	75
6	Jeenagora (N13)	Industrial area	19.02.18	60.2	75
7	Hurriladih UGP (N28)	Industrial area	07.02.18	62.6	75
8	Hurriladih UGP (N28)	Industrial area	20.02.18	61.8	75

*Permissible limits of Noise Level as per MOEF Gazette Notification No. GSR 742(E) dt. 25.09.2000 Standards for Coal Mines and Noise Pollution (Regulation and Control) Rules, 2000.

* Day Time: 6.00 AM to 10.00 PM,


 Analysed By
 JSA/SA/SSA


 Checked By
 Lab In Charge
 RI-2, CMPDI, Dhanbad


 Approved By
 HOD(Mining/Environment)
 RI-2, CMPDI, Dhanbad

JOB NO. 200316028

Cluster -VIII, BCCL Environmental Monitoring Report

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Annexure-XV

Water Quality Data

9

WATER QUALITY MONITORING

3.1 Location of sampling sites

(Refer Plate No. – II)

i) Mine Discharge of Dobari UGP (MW8)

A sampling point is fixed to assess the effluent quality of Mine discharge. This location is selected to monitor effluent discharge in to Kashi jore.

3.2 Methodology of sampling and analysis

Water samples were collected as per standard practice. The effluent samples were collected and analyzed for four parameters on fortnightly basis at the Environmental Laboratory of CMPDI RI-II, Dhanbad.

3.3 Results & Interpretations

The results are given in tabular form along with the applicable standards. Results are compared with Schedule - VI, effluent prescribed by MoEF&CC. Results show that most of the parameters are within the permissible limits.

WATER QUALITY DATA

(EFFLUENT WATER- FOUR PARAMETERS)

Name of the Cluster: Cluster -VIII		Month: February, 2018	Name of the Station: Mine Discharge of Dobari UGP	
Sl. No.	Parameters	MW8 First Fortnight	MW8 Second Fortnight	As per MOEF General Standards for schedule VI
		9-Feb-18	17-Feb-18	
1	Total Suspended Solids	34	19	100 (Max)
2	pH	8.13	7.91	5.5 - 9.0
3	Oil & Grease	<2.0	<2.0	10 (Max)
4	COD	32	28	250 (Max)

All values are expressed in mg/lit except pH.

सुमन सेठी, रुद्र

Analysed By
JSA/SA/SSA

✓

Checked By
Lab In Charge
RI-2, CMPDI, Dhanbad

21/02/18

Approved By
HOD(Mining/Environment)
RI-2, CMPDI, Dhanbad

JOB NO. 200316028

Cluster –VIII, BCCL Environmental Monitoring Report

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EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018


Annexure-XVI

<p>Lic. No. 261/07 [See Under Rule 252/02 JH (MVR)]</p> <p>TRANSPORT DEPTT. GOVT. OF JHARKHAND</p> <p>Veh. No. JH 10 P 7313</p> <p>Type of Vehicle TIPPER</p> <p>DATE OF ISSUE 21.12.2017</p> <p>VALID UPTO 20.06.2018</p>	
<p>JH10P 7313</p> <p>प्रपत्र पी. सी. झारखंड मोटर वाहन नियमावली, 2001 के नियम 252 द/2/ देखें प्रदूषण नियंत्रण के अन्तर्गत प्रमाण-पत्र</p> <p>प्रदूषण स्तर प्रमाण-पत्र</p> <p>जाँच केन्द्र का नाम J.S. Auto Emission Testing Centre (A Friend of Environment) Vehicle Pollution Testing Centre P.W.D. Jharis Sindri Road, Patherdih (Dhanbad)</p>	
<p>अनुज्ञापि संख्या मोटर वाहन संख्या मेक : मोडल : निस्सरण स्तर की जाँच एवं निम्न पठन पाया</p>	<p>कम संख्या JS/05</p> <p>निर्गत की तिथि : 21.12.2017</p> <p>वाहन का प्रकार : TRUCK</p>
<p>CMVR 1989 के नियम 115/2/ के अन्तर्गत निर्धारित मापदण्ड CO-0.5%-4.5% HC - 750-9000</p>	<p>गैस का नाम वास्तविक पठन NA</p>
<p>CMVR 1989 के नियम 115/2/ के अन्तर्गत निर्धारित मापदण्ड H.S.U. - 65 फूल लोड-</p>	<p>गैस का नाम वास्तविक पठन 54%</p>
<p>की एक्सेलेरेशन- CMVR 1989 के नियम 115 /2/ के अन्तर्गत निर्धारित निस्सरण मापदण्ड को पूरा करता है/पूरा नहीं करता है</p>	<p>ALL INDIA VALID</p>
<p>जाँच केन्द्र की मुहर P.W.D. Jharis Sindri Road, Patherdih (Dhanbad)</p>	<p>प्राधिकृत हस्ताक्षर</p>
<p>नोट:- यह प्रमाण पत्र निर्गत की तिथि से छः माह तक वैध है।</p>	

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

	<p align="center">GOVERNMENT OF JHARKHAND</p> <p align="center">State Transport Department DHANBAD FORM 38 [See Rule 62(1)] CERTIFICATE OF FITNESS (Applicable in the case of transport vehicles only)</p>	
<p>Vehicle No JH10BK2301 (Goods Carrier) is certified as complying with the provisions of the Motor vehicles Act, 1988 and the rules made there under.</p>		
<p>Certificate will expire on : 14-Jan-2020 ✓</p>		
<p>Next Inspection Due : 16-Dec-2019</p>		
<p>Date</p>		
<p>Inspection Fee Receipt : JH10R18010002805</p>		
<p>No</p>		
<p>Application No : JH18011393072434</p>		
<p>Receipt Date : 13-Jan-2018</p>		
<p>Chassis No : MAT448187HAN14727</p>		
<p>Engine No : 71L84430554</p>		
<p>Seating Capacity : 2 (Including Driver)</p>		
<p>Registration No ✓ : JH10BK2301</p>		
<p>Manufacturing Year : 2017</p>		
<p>Inspected on : 15-Jan-2018</p>		
<p>Printed on : 18-Jan-2018 21:52:35</p>		
<p>Type of Body : TIPPER</p>		
<p>Category of Vehicle : HGV</p>		
<p>Inspected by : MVI DHANBAD</p>		
<p align="right"> Inspector of Motor Vehicle Signature of Inspecting Authority Dhanbad, Jharkhand DHANBAD</p>		

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018


02598

FORM 38
[See Rule 62 (1)]
CERTIFICATE OF FITNESS
(Applicable in the case of Transport Vehicles only)

Vehicle No. JH-10V-5658 P/LOADER is certified as complying with provision of sec 56 of the Motor Vehicles Act. 1988 and the rules made there under.

The Certificate will expire on 01.01.2019 ✓

Dated : 02.01.2018



The Certificate of fitness is hereby renewed :-

From: C. S.
Inspector of Motor Vehicle
Dhanbad, Jharkhand

To:

Signature and designation of inspecting authority or
Signature of the holder of the letter of uthority of
the authorised testing station.

Holder of the Letter of Authority
Environmental & Motor Vehicle
Signature and designation of inspecting authority or
Signature of the holder of the letter of authority of
the authorised testing station.

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Annexure-XVII

Training (VTC)

No of employees received training in Cluster VIII (October'2017 to March'2018)	
Name of Colliery	Numbers
Bastacolla	134
Bera	24
Dobari	20
Kuya	67
Ghanoodih	8
Kujama	12

Six Monthly Environmental Clearance Compliance Report of Cluster VIII Group of Mines

EC No: J-11015/298/2010-IA.II(M) Dated 15.02.2013

Period: October 2017 to March 2018

Annexure-XVIII

PME

No of employees undergone PME in Cluster VIII (October'2017 to March'2018)	
Name of Colliery	Numbers
Bastacolla	191
Bera	109
Dobari	38
Kuya	153
Ghanoodih	89
Kujama	33

CSR, R&R and Transportation Plan of Cluster VIII

As per EC Condition (Specific Condition No 4)

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 form



Bharat Coking Coal Limited

(A Mini Ratna Company)

Bastacolla Area

Dhanbad

CIL'S POLICY FOR CORPORATE SOCIAL RESPONSIBILITY (CSR)

Introduction

Mining of coal has profound impact on the people living in and around the areas where the mines are established. The obvious impact of the introduction of any production activity in such areas change the traditional lifestyle of the original inhabitants and indigenous communities and also change the socio-economic profile of the Area. Hence, the primary beneficiaries of CSR for the company are:

- Land oustees,
- PAPs and
- Those staying within the radius of 25 Kms of the Project.

Poor and needy section of the society living in different parts of India are the second beneficiaries.

In the aforesaid backdrop, policy on Corporate Social Responsibility of CIL has been framed after incorporating the features of the Companies Act 2013 and as per notification issued by Ministry of Corporate Affairs, Govt. of India on 27.02.2014 as well as DPEs guidelines and broadly covers the following: -

- a) Welfare measures for the community at large, so as to ensure the poorer section of the Society derived the maximum benefits.
- b) Contribution to the society at large by way of social and cultural development, imparting education, training and social awareness especially with regard to the economically backward class for their development and generation of income to avoid any liability of employment.
- c) Protection and safeguard of environment and maintaining ecological balance.

Objectives

The main objective of CSR policy is to lay down guidelines for the coal companies to make CSR a key business process for sustainable development for the society. It aims at supplementing the role of the Govt. in enhancing welfare measures of the society based on the immediate and long term social and environmental consequences of their activities. CIL will act as a good Corporate Citizen, subscribing to the principles of Global Compact for implementation.

Areas Covered under CSR

- The poor and needy Section of the Society living in different parts of India are covered.
- The CSR Programme also covers the existing components of Special Component Plan (SCP) and Tribal Sub Plan (TSP) for development of the SC and ST population besides development components for the entire population.

80% of the budgeted amount is spent within the radius of 25 Km of the Project Site/Mines/Area HQ/Company HQ and 20% of the budget is spent within the State.

Allocation of Fund

The fund for the CSR is allocated based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2.00 per tonne of Coal Production of previous year whichever is higher.

Scope

As per Schedule VII of New Companies Act 2013, the following are the Scope of Activities under Corporate Social Activities:

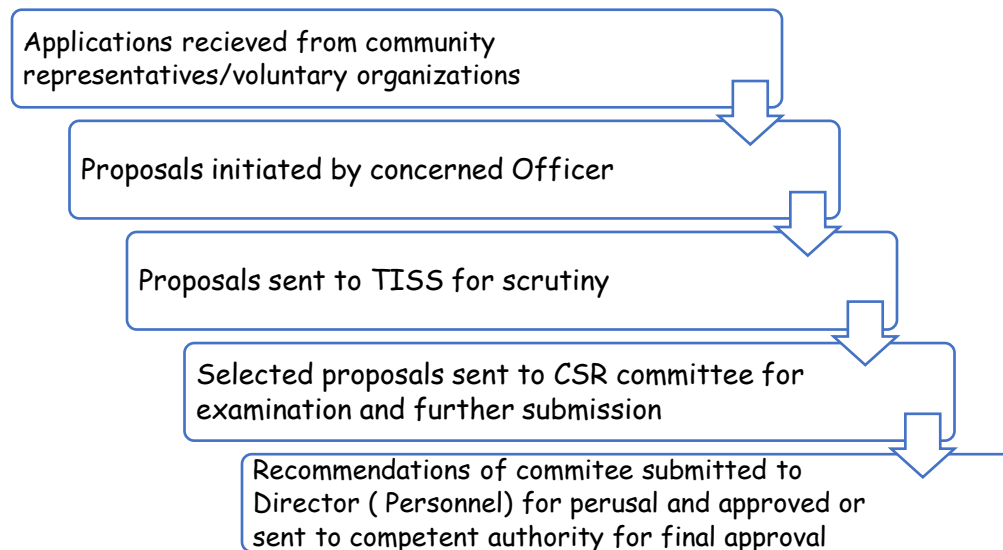
- i) Eradicating hunger, poverty and malnutrition, promoting healthcare including preventive health care and sanitation and making available safe drinking water.
- ii) Promoting education, including special education and employment enhancing vocation skills especially among children, women, elderly, and differently abled and livelihood enhancement projects;
- iii) Promoting gender equality, empowering women, setting up homes and hostels for women and orphans, setting up old age homes, day care centers and such other facilities for senior citizens and measures for reducing inequalities faced by socially and economically backward groups;
- iv) Ensuring environmental sustainability, ecological balance, protection of Flora and Fauna, animal welfare, agro-forestry, conservation of natural resources and maintaining quality of soil, air and water;
- v) Protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art; setting up public libraries, promotion and development of traditional arts and handicrafts;
- vi) Measures for the benefit of armed forces veterans, war widows and their dependents

- vii) Training to promote rural sports, nationally recognized sports, Paralympics sports and Olympic sports;
- viii) Contribution to the Prime Minister's National Relief Fund or any other fund set up by the Central Government for socio-economic development and relief and welfare of the Scheduled Castes, the Scheduled Tribes, other backward classes, minorities and women;
- ix) Contributions or funds provided to technology incubators located within academic institutions which are approved by the Central Government;
- x) Rural development projects

Implementation

- The investment in CSR is project based and for every project time framed periodic mile stones should be finalized at the outset.
- Project activities identified under CSR are implemented by Specialized Agencies. Specialized Agencies are made to work singly or in tandem with other agencies. Specialized agencies that are included presently for implementation of CSR projects in Cluster VIII are through Contracted agencies for civil works.

Institutional Arrangement



Area	Village	Panchayat	Block	District	No. of Sample
Bastacolla	Amtal (Bandhkuli)	Amtal	Baliyapur	Dhanbad	61
	Amtal (Shaharpura)	Amtal	Baliyapur	Dhanbad	60
	Duhatand	Duhatand Ward 33	Dhanbad MC	Dhanbad	60

Baseline study done by TISS

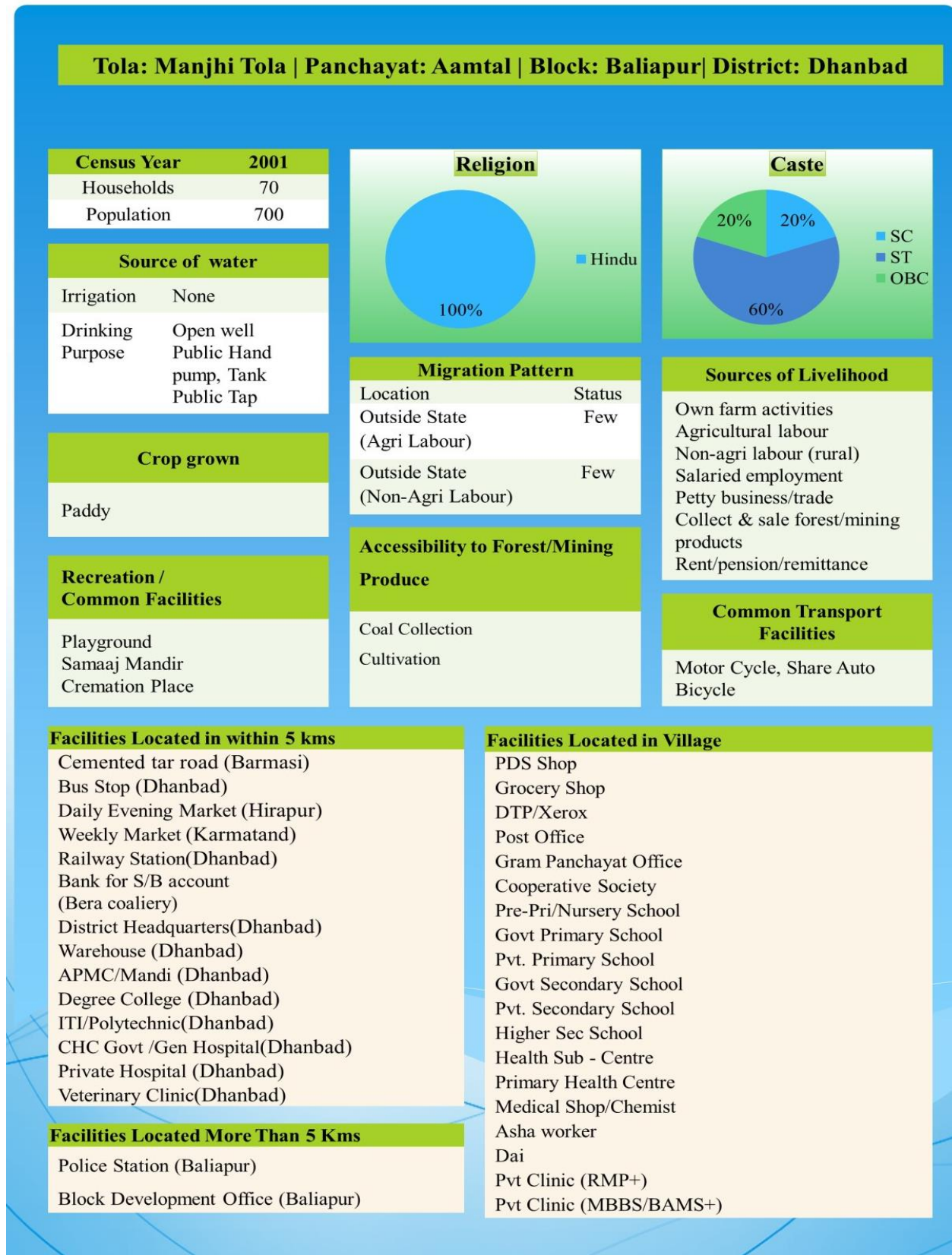
Villages covered under Cluster VIII

1. Aamtal (Bandhkuli)



AREA	MAJOR PROBLEMS AND RECOMMENDATIONS
Education	Bench facility at primary school
	Scholarship for Children of BPL families
Water Supply	Treated drinking water is required
	Water tanks should be provided during summer
Health Care	Awareness about maternity health care and family planning is required in this village
	Health check-up at primary school should be done
Sports & Culture	Youth club should be formed and provided with sports material
Livelihood	Piggery and Poultry should be provide for livelihood support
	No SHG of Men and Women
	Differently able people should get vocational training an employment
Sanitation	Fumigation for mosquitos ins needed in this village
Infrastructural Development	Pond cleaning should be done regularly

2. Aamtal (Shaharpur)



AREA	MAJOR PROBLEM AND RECOMMENDATIONS
Education	School drop outs should be introduced to a regular coaching class to complete at least 10 th class. Vocational training should also be provide for self-employment
	Evening classes for old age as well as illiterates
Water Supply	Hand pump maintenance is needed
	Irrigation facility should be provided
Health Care	Maternity health camp is needed
Sports & Culture	Sports material Should be provided to the sports club for various tournaments
Livelihood	Livestock activity like Goatry, Poultry and piggery has huge scope
Sanitation	No toilets in any of the house holds
	Poor drainage and garbage disposal is there. BCCL should introduce trash bin and ensure its disposal regularly
	Fumigation for prevention from Malaria
Infrastructural Development	Formation of SHG is essential in this village
	Playground should have boundary

3. Duhatand

Tola: Mallik Tola and Manjhi Tola | Panchayat: Duhatand (Ward No. 33)| Block: Dhanbad Municipal Corporation| District: Dhanbad

Census Year	2001
Households	65
Population	300

Source of water	
Irrigation	None
Drinking Purpose	Open well, public and private hand pump

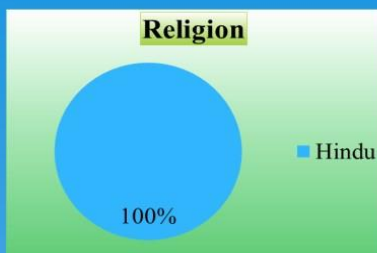
Crop grown
Paddy, maize

Recreation / Common Facilities
Playground Samaaj Mandir Cremation Place

Common Transport Facilities
Motor Cycle Bicycle

Facilities Located in Villages
PDS Shop Pre-Pri/Nursery School Govt Primary School Pvt Clinic (RMP+) Asha worker Dai

Facilities Located More Than 5 Kms
ITI/Polytechnic Police Station (Jadhudih, Dhanbad)



Migration Pattern	
Location	Status
Outside State (Agri Labour)	rarely

Accessibility to Forest/Mining Produce
Coal Collection, fruits and leaves Cultivation, fire wood

Sources of Livelihood
Own farm activities Agricultural labour Non-agri labour (rural) Salaried employment Petty business/trade Collect & sale forest/mining products Rent/pension/remittance

Facilities Located Within 5 Kms
Bus Stop (Dhanbad) Daily Evening Market (Dhanbad) Weekly Market (Dhanbad) Grocery Shop (Dhokra) DTP/Xerox (Bhuda) Post Office (Dhanbad) Railway Station(Dhanbad) Municipal Corporation (Dhanbad) Cooperative Society (Dhanbad) Bank for S/B account(Munaitand) Block Development Office (Dhanbad) District Headquarters (Dhanbad) Warehouse (Barmasia) APMC/Mandi (Manitand) Pvt. Primary School(Bhuda) Govt Secondary School(Patrakuli) Higher Sec School (Dhanbad) Degree College (Dhanbad) ITI/Polytechnic(Dhanbad) CHC Govt /Gen Hospital(Dhanbad) Pvt Clinic (MBBS/BAMS+) (Bhuda) Private Hospital (Dhanbad) Veterinary Clinic(Dhanbad) Medical Shop/Chemist (Bhuda)

Area	Major problem and Recommendations
Education	Middle school needs sufficient chairs and table for students
	During the field visit it was found that awareness about education has been found very less. BCCL with the help of some reputed NGO which works on Education sector should encourage the villagers to enroll their children to school
Water Supply	Villager face problem of drinking water. The need of well and hand pumps with purifier was observed.
	There is no facility of irrigation for agriculture purpose
Health Care	There is no sub center at vicinity. Mobile Medical Van can be a good option for this village.
Sports & Culture	Sports club should be formed in this village and should be provided with all the sports materials to the youth
Livelihood	Introduction of Goatry, Piggery and poultry is necessary in this village as majority of the community are well experienced in handling livestock
	Vocational Training for girls in tailoring is required in this village
	There is no SHG in the village. BCCL should take initiative with the help of NGO to encourage the men and women of this village to start SHG for income Generation Activity.
Sanitation	Majority of the houses do not have toilet facility in the village
Infrastructural Development	No toilet in Primary school of Duhatand
	Contraction of Bathroom at Pond for women

CSR Projects undertaken during the year 2017-18

1. Construction of Toilets under Swachh Vidyalaya Abhiyan

The Ministry of Human Resource Development has launched Swachh Vidyalaya Programme under Swachh Bharat Mission with an objective to provide separate toilets for boys and girls in all government schools within one year. The Ministry financially supports States/Union Territories inter alia to provide toilets for girls and boys in schools under Sarva Shiksha Abhiyan (SSA) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA). Under SSA and RMSA 88,728 toilets have been sanctioned during 2014-15. 1.58 lakh toilets as well as dysfunctional toilets have been taken up by Public Sector Undertakings/Corporates for construction/repairs. CIL vowed to construct as well as make dysfunctional toilets functional; the number being 51,115. BCCL in turn got a target of 3000 toilets to construct/make toilets functional out of which Cluster VIII got a target of 238 toilets construction/repairing.

Construction of Toilets under Swachh Vidyalaya Abhiyan				
District	Block	No of Toilets	Status (Completed)	Amount spent till date (In Rupees)
Simdega	Bano	238	96 % Completed (As combined Block of Toilets, work completed are: 1. Toilet Structure, 2. MS Door Shutter with Frame 3. Urinal Basin 4. Bib Cock 5. Indian WC Pan with Low Level Cistern 6. Incineration Box 7. PVC Door Shutter 8. PVC Water Storage Tank [1000 Ltrs x2])	FY 2015-16: Rs. 2,14,84,259.98
	Bolba			
	Jaldega			
	Karsai			FY 2016-17
	Kolebira			Rs. 1,26,17,747.00
	Kurdge			
	Pakardanr			FY 2017-18
	Rigdi			Rs. 47,88,229.91
	Madhuban			
	Sewai			Total Rs. 38890236.89
	B. Pani			
	Sansewai			
	Kulukera			
	T. Tanger			
	Simdega			

2. Community Welfare (As a Part of Community Development Program)

Funds are provided to some schools in and around the mining areas of the Area office and collieries are given grants for the smooth functioning of the schools. The schools provided grant by Bastacolla area in the year 2017-18 are as follows:

Name of School	Location	Amount Spent
		FY 2017-18
L. P. School, Bastacolla	Bastacolla	60000.00
Harizan L.P. School, Bastacolla	Bastacolla	90000.00
L.P. School, Chandmari	Chandmari	123000.00
Dobari Middle School	Dobari	153000.00
Adarsh Shishu Bharati L.P. School	Victory	93000.00
Bal Vidhyalaya, Liberty, Bera	Bera (Bastacolla - Sonar Basti)	156000.00
Bal Vidhya Mandir	Ghanoodih	63000.00
Koyla Khadan Shramik Vidyalaya	Ghanoodih	243000.00
L. P. School, 1-2 pit, Ghanoodih	Ghanoodih	60000.00
Total		10,41,000.00

R&R of PAFs

The mines in the cluster VIII are affected by fire and subsistence and rehabilitation of the affected people has been envisaged in the Master plan approved by Government of India. A table with number of project affected families (private as well as BCCL employees) rehabilitated till FY 2017-18 is provided below:

Non BCCL families shifted:

Sl. No.	Name of Colliery	No of PAFs Rehabilitated/Shifted
1.	Bastacolla Colliery	0
2.	Bera Colliery	0
3.	Dobari Colliery	121
4.	Ghanoodih Colliery	571
5.	Kuya Colliery	304
6.	Kujama Colliery	148
Total		1144

BCCL employees shifted:

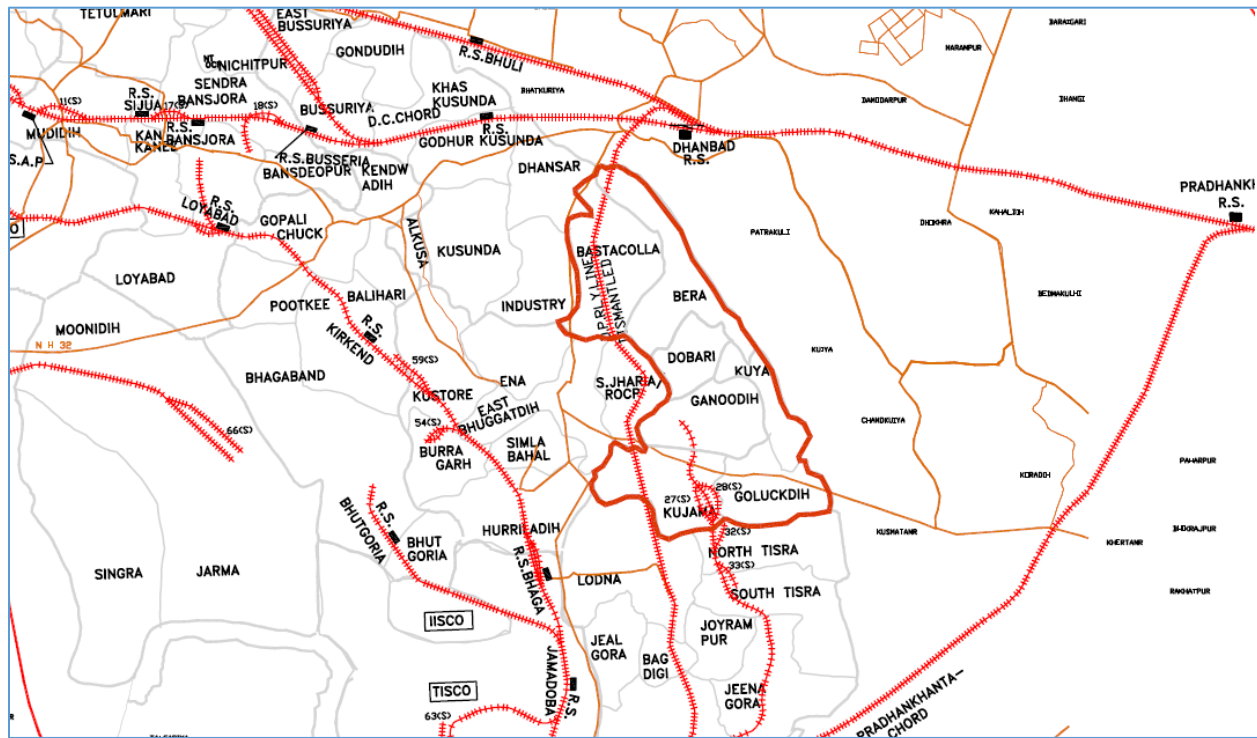
Sl. No.	Name of Colliery	No of BCCL employees shifted
1.	Bastacolla Colliery	2
2.	Bera Colliery	0
3.	Dobari Colliery	236
4.	Ghanoodih Colliery	343
5.	Kuya Colliery	164
6.	Kujama Colliery	48
Total		793

Transportation Plan

The transportation plan for cluster VIII for the financial year 2017-18 financial year is shown below:

Sl. No.	Mine	Existing siding	Existing Transport distance (in KM)
1.	Bastacolla	CK	7-8
2.	Bera UG	CK	5-6
3.	Bera OCP	CK	4-5
4.	Dobari	BNR	8-9
5.		CK	5-6
6.	Kuya OCP	CK	
7.	Kuya UG	Road sale	
8.	Goluckdih NC	BNR	8-9
		CK	1-2
9.	Ghanoodih	CK	2-3

TRANSPORTATION PLAN OF CLUSTER VIII GROUP OF MINES (AS PER EMP)



INDEX

ROAD

RAILWAY



PROPOSED
PROJECT
(CORE ZONE)