



BHARAT COKING COAL LIMITED

(A Subsidiary of Coal India Ltd.)

Office of the General Manager

Govindpur Area No. III

PO- Sonardih, DHANBAD – 828125

Contact No: 0326-2392162 email- cgmgovindpur@bccl.gov.in

Ref: BCCL: AR.III: GM: ENV: 16:

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Dated: 28.06.2016

30)

To
The Director(s)
Ministry of Environment, Forest and Climate Change,
Govt. Of India
Regional Office (ECZ), Bungalow No. A-2, Shyamali Colony
Ranchi – 834002

Sub: - Six monthly Reports on Implementation of environmental measures for the period from Sept '15 to Apr '16 in respect of Cluster III group of mines EC Order no. J-11015/213/2010-1 A.II (M) dated 06.02.13.

Dear Sir,

Enclosed please find herewith six monthly Reports on Implementation of environmental measures for the period from Sept '15 to April '16 in respect of Cluster III group of mines EC Order no. J-11015/213/2010-1 A.II (M) dated 06.02.13 for your kind perusal.

Yours faithfully,

General Manager

Govindpur Area, BCCL

Copy To:-

1. Director, IA monitoring cell
Paryavaran Bhawan CGO Complex, New Delhi – 110003.
2. HOD (Env.) BCCL, Koyla Bhawan, Dhanbad.
3. Addl. General Manager, Govindpur Area.
4. Nodal Officer (Envt.), Govindpur Area.

COMPLIANCE OF EC CONDITIONS: - CLUSTER-III**EC Letter No. J – 11015/213/2010- IA. II (M), Dated 06.02.2013**

S. no.	A. Specific Conditions by MOEF:	Compliance
i	The maximum production from the two opencast sections in the cluster shall not exceed beyond that for which environmental clearance has been granted	The approved normative production and peak production are 2.10 MTPA & 2.73 MTPA respectively. There is a proposed addition of HEMM projects in cluster-III which will lead to increase in production thus changes to the present EC has to be made for which mine plan is being prepared.
ii	The measure to identify in the Environmental Plan for Cluster- III groups of mine and the conditions given in this environmental clearance letter shall be dovetailed to the implementation of the Jharia Action Plan.	Master Plan activities are dovetailed with compliance of environmental clearance conditions.
iii	<p>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.</p> <p>Measures to prevent ingress of air (Ventilation) in such areas, to prevent restart fresh/spread fires in other areas including in mines of cluster III shall be undertaken. Expertise available internationally could also be utilized for control of fire in Jharia Coalfields and for their reclamation and to further minimize time for fire and subsidence control. Isothermal mapping using thermal imaging has been got done by NRSA. Measures would be taken to prevent ingress of air (ventilation) in such areas, which may re-start fresh fires.</p>	<p>NRSC has been engaged for the purpose and NRSC has submitted their final report. Fire affected area has been reduced from 9.00 KM² to 2.18 KM. For further dealing of fire and subsidence action has been taken and working as per the strategic plan of digging out of fiery coal followed by reclamation.</p> <p>Further action is being taken as specified in EC and as per Jharia Master Plan. Fire patches are under operation to dig out the fiery coal and combustible materials to save the coal from burning and to stop further spread of the fire. Once the fiery coal is dug-out/excavated there will be no more chance of re-starting of fresh/ spreading of fire into other areas.</p>
iv	Underground mining should be taken up after completion of reclamation of Opencast mine area.	It shall be complied.
V	The OB material should be crushed like sand and be used for stowing in underground mines.	The methods of utilization of OB material for stowing are being explored. It will be used when pillar extraction below important surface features/town/village etc. will be carried out.

	production with plan for OB dumping and backfilling (for OC mines) and reclamation and final mine closure plan for each mine of cluster-III shall be drawn up and implemented. The schedule of backfilling should be clearly brought out and submit the same to MoEF.	Mine closure plan as per the guidelines of Ministry of Coal is finalized and circulated by Regional Institute -II, Central Mine planning and Design Institute, Dhanbad. The financial provisions required for the implementation of mine closure plan are being kept in accounts.
vii	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and Stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.	It is being followed. Embankments have been constructed as specified in EC
viii	The rejects of washeries in Cluster -III should be send to FBC based plant.	Coal washery does not exist in this cluster at present.
ix	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 shall be complied. Action is being taken to control, mine fires including old OB dump areas as specified in Jharia Master Plan and the mining is being done as per the guidelines and permissions of Directorate General of Mines Safety (DGMS).
x	There shall be no external OB dumps. OB produce from the whole cluster will be 80Mm ³ . OB from 2 OCP in mixed mines shall be backfilled. At the end of the mining there shall be no void and The entire mined out area shall be re-vegetated. Areas where opencast mining was carried out and completed shall be reclaimed immediately thereafter. It was observed that most of the OBs are not reclaimed and abandoned. The proponent should dump all the OB material in abandoned mines.	It is being complied. Action is being taken as specified in EMP for Backfilling of OB concurrent with and reclaimed. Two backfilled sites have been changed into ecological restoration parks and the process is showing good results.
xi	Number of voids present in cluster - III at the end of mining should be backfilled up to ground level and no void should be left at the end of mining.	It shall be complied.
xii	A detailed calendar plan Of production with the plan for OB dumping and backfilling (for O/C mines) and reclamation and final mine closure plan for each mine of cluster-III shall be drawn up and implemented. The schedule of backfilling should be clearly brought out and submit the same to MoEF.	Calendar plan of production has been formulated and hereby enclosed in annexure - 'B1,' OB dumping and backfilling (for O/C mines) and reclamation is already under preparation and CMPDIL has prepared a final mine closure plan.
xiii	Mining shall be carried out as per statute from the streams/nalas	It is being followed. Embankments have been constructed as specified in EC

	<p>flowing within the lease and maintaining a safe distance from the Nalas flowing along the lease boundary. A safety barrier of a minimum 60m width shall be maintained along the nalas/water bodies. The small water bodies in OC shall be protected to the extent feasible and the embankment proposed along water body shall be strengthened with stone pitching.</p>	
xiv	<p>Active OB dumps near water bodies and rivers should be rehandled for backfilling abandoned mine voids. However, those which have been biologically reclaimed need not be disturbed.</p>	<p>No OB is being dumped near water bodies. The OB dumps created earlier already stabilized & further action has been taken for their eco-restoration work as per Road Map prepared by FRI, Dehradun and as per the action plan of Prof. CR Babu, Professor Emirates CEMDE, Delhi University. Details of programme of eco-restoration are enclosed as annexure-C.</p>
xv	<p>Thick green belt shall be developed along undisturbed areas, mine boundary and in mine reclamation. A total area of 854.72 ha shall be reclaimed and afforested.</p>	<p>It shall be complied. Yearly plantation is being done for development of green belts as per EC.</p>
xvi	<p>Details of transportation, CSR, R&R and implementation of environmental action plan for the clusters-III should be brought out in a booklet form within a year and regularly updated.</p>	<p>It shall be complied.</p>
xvii	<p>Specific Mitigative measures identified for the Jharia Coalfields in the Environmental Action Plan prepared for Dhanbad as a critically polluted area and relevant for Cluster III shall be implemented.</p>	<p>Dhanbad Action Plan has been prepared in consultation with Jharkhand Pollution Control Board for entire BCCL and not cluster wise. It is being implemented comprehensively for all the mines of BCCL. Some of the salient actions of this cluster are as under:</p> <ol style="list-style-type: none"> 1. Construction of pucca road 2. Construction of water reservoir for mine water utilization 3. Plantation. 4. Transportation of coal in covered vehicles
xviii	<p>The locations of monitoring stations in the Jharia Coalfields should be finalized in consultation with the Jharkhand State Pollution Control Board. The Committee stated that smoke/dust emission vary from source to source (fuel wood, coal, fly ash from TPPs, silica from natural dust, etc.) and a Source Apportionment Study should be got carried out for the entire Jharia Coalfields. Mineralogical composition</p>	<p>The work of monitoring of ambient environment is being done by Central Mine Planning and Design institute (CMPDIL). For Source Apportionment study NEERI is in process to submit the project proposal as per the MoU of CIL with NEERI to take up such studies.</p>

	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.	
xix	The Plan for conveyor-cum-rail for Cluster-III should be dovetailed with Jharia Action Plan. The Committee desired that road transportation of coal during Phase-I should be by mechanically covered trucks, which should be introduced at the earliest. Coal dispatch shall be diverted from the present rail sidings to Rapid Loading System (RLS) soon after the construction and commissioning of the RLS at Maheshpur is completed. The railway siding order issued and same would come in 3 years. The details of same should be provided to ministry. The mode of transportation of coal by truck till Railway Siding 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 regarding. Conversion of existing truck in to mechanically covered trucks in a phased manner has been taken up. By that time transportation is being done by covered vehicle with a tarpaulin cover.
xx	3756 nos of PAF's should be rehabilitated at cost of Rs 27012.66 Lakhs as per the approved Jharia Action Plan.	It is being followed as per the approved Jharia action plan.
xxi	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 piezometers. 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.	The work of monitoring of ambient environment including ground water monitoring is being done by Central Mine Planning and Design institute (CMPDIL). Monitoring stations have been set up and Central Mine Planning and Design institute (CMPDIL) has been keeping a constant check. For establishing new piezometers competent authority has approved the scheme. The tender is being floated for the same.
xxii	Regular monitoring of subsidence movement on the surface over and	At present, only one depillaring district is operational at Maheshpur UG in Cluster III and others are development districts. Regular

	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.	monitoring of subsidence over depillared area is being done as per stipulation.
xxiii	Sufficient coal pillars shall be left un-extracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.	Sufficient coal pillars have been left around air shafts as per the statutes and DGMS guidelines.
xxiv	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	Identification of high root density Plant and its plantation in subsidence prone area is in the process. The plantation programme will include such plants.
xxv	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 complied.
xxvi	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.	It is being followed. Sufficient barriers are left for saving the surface installation and infra structures as per the statute and DGMS guidelines.
xxvii	No depillaring operation shall be carried out below the township/colony.	It is followed.
xxviii	A detailed CSR Action Plan shall be prepared for Cluster III group of mines. Specific activities shall be identified for CSR for the budget of Rs 139 Lakhs per year@ Rs 5/T of coal provided for CSR for 2012-2013 and Rs. 5/T of coal as recurring expenditure. The 491.91ha of area within Cluster III ML existing as waste land and not being acquired shall be put to productive use under CSR and developed with fruit bearing and other useful species for the local communities. Third party evaluation shall be got carried out regularly for the proper implementation of activities undertaken in the project area under CSR. Issue raised in the Public Hearing shall also be integrated with activities being taken up under CSR. The details of CSR undertaken along with budgetary provisions for the village-wise various activities and expenditure thereon shall be uploaded on the company website	<p>BCCL is implementing CSR activities. The details of activities are as enclosed in Annexure-E.</p> <p>A detailed project specific CSR Action Plan shall be formulated and for this purpose, BCCL has approached TATA INSTITUTE OF SOCIAL SCIENCES, MUMBAI which is also the focal agency of the National CSR Hub.</p> <p>TISS, Mumbai has informed that the process of interviewing, short listing and selection of Program Managers and Program Officers has been completed and their Officers are expected to report on field duty soon.</p>

	every year. The company must give priority to capacity building both within the company and to the local youth, who are motivated to carry out the work in future. The gap/space available between the entire mine area should be suitably planted with native species. Plantation should also be made in vacant area and along the road side so as to reduce dust pollution.	
xxix	Central recreation park with herbal garden should be developed for use of all inhabitants.	Being complied. Action has already been taken for identification of land for development of herbal garden for the inhabitants/ nearby society under the CSR activity of the company.
xxx	The mine water should be treated properly before supply to the villager.	<p>Mine water has been channelized through pipelines and through delivery in to the ponds for it is for the community and irrigation purposes. Drinking water is being purchased from the Mineral Area Development Authority (MADA).</p> <p>Further for the utilization of mine water following actions has been taken by the company :</p> <ol style="list-style-type: none"> 1. Installation of Pressure filters: BCCL has installed 25 pressure filter plants of total capacity of 16 MGD at the cost of Rs. 2.75 crores to meet the drinking water requirements in the area. Further installation of 28 more pressure filters with the capacity of 5 MGD are in the process. 2. An R&D/ pilot project taken up by CIMFR, Dhanbad at Putki colliery for mine water treatment for its utilization for drinking water is also being supported. CIMFR has further requested to BCCL for Rs 20 Lakh/annum for its maintenance and bottling of purified drinking water. This fund will be met through CSR fund of BCCL 3. BCCL is in the process of entering into multiple Patents of this scheme and technology with CIMFR for further replication of this scheme in other mines to use mine water fully. 4. There is a water filter plant already in operation at Sinidih. After filtration, drinking water is being supplied to different colonies and villages for drinking purposes.
xxxi	Details of transportation, CSR, R&R and implementation of environmental action plan for each of the clusters-III should be brought out in a booklet form within a year and regularly updated.	It shall be complied.
xxxii	Central recreation park with herbal garden should be developed for use of all inhabitants.	Being complied. Action has already been taken for identification of land for development of herbal garden for the inhabitants/ nearby society under the CSR activity of the company.
xxxiii	The mine water should be treated properly before supply to the villager.	<p>Mine water has been channelized through pipelines and through delivery in to the ponds for it is for the community and irrigation purposes. Drinking water is being purchased from the Mineral Area Development Authority (MADA).</p> <p>Further for the utilization of mine water following actions has been taken by the company :</p>

		<ol style="list-style-type: none"> 1. Installation of Pressure filters: BCCL has installed 25 pressure filter plants of total capacity of 16 MGD at the cost of Rs. 2.75 crores to meet the drinking water requirements in the area. Further installation of 28 more pressure filters with the capacity of 5 MGD are in the process. 2. An R&D/ pilot project taken up by CIMFR, Dhanbad at Putki colliery for mine water treatment for its utilization for drinking water is also being supported. CIMFR has further requested to BCCL for Rs 20 Lakh/annum for its maintenance and bottling of purified drinking water. This fund will be met through CSR fund of BCCL 3. BCCL is in the process of entering into multiple Patents of this scheme and technology with CIMFR for further replication of this scheme in other mines to use mine water fully. 4. There is a water filter plant already in operation at Sinidih. After filtration, drinking water is being supplied to different colonies and villages for drinking purposes.
xxxiv	Details of transportation, CSR, R&R and implementation of environmental action plan for each of the clusters-III should be brought out in a booklet form within a year and regularly updated.	It shall be complied.
xxxv	Mine discharge water shall be treated to meet standards prescribed 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.	The work for keeping a check on the mine water quality is being done by Central Mine Planning and Design institute (CMPDIL). The quality of water is within prescribed standards.
xxxvi	<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 due to dewatering of mine.</p>	<p>No ground water is being utilized for the purpose of industrial use of the water. Mine water has been channelized through pipelines and through delivery in to the ponds for it is for the community and irrigation purposes. Drinking water is being purchased from the Mineral Area Development Authority (MADA).</p> <p>Further for the utilization of mine water following actions has been taken by the company</p> <ol style="list-style-type: none"> 1. Installation of Pressure filters: BCCL has installed 25 pressure filter plants of total capacity of 16 MGD at the cost of Rs. 2.75 crores to meet the drinking water requirements in the area. More pressure filters shall be put in to operation. 2. Rain water Harvesting: to catch run-off water in colonies Rain water Harvesting is being done. BCCL has already awarded work for 138 houses at Koyla Nagar Township covering surface area of 14450 sq. mts. of roof top with total cost of Rs77.36 lakhs. It has been estimated that the system will recharge 13150 cum of water per annum to the ground water.
xxxvii	The void shall be converted into a	Continuous process of the backfilling has been adopted. A part of

	water reservoir of a maximum depth of 15-20 m and shall be gently sloped and the upper benches of the reservoir shall be stabilized with plantation and the periphery of the reservoir fenced. The abandoned pits and voids should be backfilled with OB and reclaimed with plantation and or may be used for pisciculture.	the void will be converted into the water body as specified in EC.
xxxviii	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.	The work of monitoring of ambient environment including ground water monitoring is being done by Central Mine Planning and Design institute (CMPDIL). The monitoring stations have been set up and proper check is being maintained in this regard.
xxxix	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.	Construction of ETP/ Oil grease Trap is being taken up.
xl	The location of monitoring stations in the Jharia coalfield should be finalized in consultation with Jharkhand State Pollution Control Board.	It will be complied.
xli	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhubaneswar.	Presently a time series map of vegetation cover in the Jharia Coal Field is being carried out through CMPDI Ranchi using satellite imagery for every 3 years. Further CMPDI has been requested to prepare "Time series of land use maps based on satellite imagery of the core zone and buffer zone in the scale 1:5000."
xl ii	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	Mine closure plan as per the guidelines of Ministry of Coal have been prepared by Central Mine Planning and Design Institute (CMPDI) and it is being implemented.

	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.	
xliv	A separate management structure for implementing environment policy and socio-economic issues and the capacity building required in this regard.	<p>A full-fledged Environment Department, headed by a HoD (Environment) along with a suitable qualified multidisciplinary team of executives which includes Environment, Mining, Civil disciplines executives and technicians has been established in Headquarters. They are also trained in ecological restoration, sustainable development, rainwater harvesting methods etc. At the project level, one Executive in each area has also been nominated as Project Nodal Officer (Environment) and is also entrusted with the responsibility of compliance and observance of the environmental Acts/ Laws including environment protection measures. The activities are monitored on regular basis at Area and at Headquarters levels. GM (Environment) at head quarter level, co-ordinates with all the Areas and reports to the Director (Technical) and in turn he reports to the CMD of the company.</p> <p>The team is multidisciplinary and very much motivated under the guidance of company's Director (Technical) and CMD. Further capacity building at both corporate and operating level is being done.</p>
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</p>	<p>A well-defined Corporate Environment Policy has already been laid down and approved by the Board of Directors. This is also posted on BCCL website.</p> <p>Complied.</p> <p>A hierarchical system of the company to deal with environmental issues from corporate level to mine level already exists.</p> <p>Being complied.</p>

	and/or shareholders or stakeholders at large.	
	General Conditions by MOEF::	
i	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	Being followed.
ii	No change in the calendar plan of production for quantum of mineral coal shall be made.	Being followed. Production is being done well within the peak production capacity as per EC.
iii	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for 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.	Establishment of Four ambient air quality monitoring stations by CIMFR has been completed. The work for monitoring of ambient environment is being done by Central Mine Planning and Design institute (CMPDIL).
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 recognised under the EPA rules, 1986 shall be furnished as part of compliance report.	The work for monitoring of ambient environment is being done by Central Mine Planning and Design institute (CMPDIL). The stations for air quality check have been set and constant check is being maintained by CMPDIL.
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.	Being Complied.
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 19 th May 1993 and	The work for monitoring of ambient environment is being done by Central Mine Planning and Design institute (CMPDIL). Monitoring stations have been set up by CMPDIL and constant check is being maintained by them.

	31 st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	
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.	Being Complied.
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 recognised under EPA Rules, 1986.	Establishment of monitoring stations is already in process and Jharkhand State Pollution Control Board is being pursued in this regard. The work for monitoring of ambient environment is being done by Central Mine Planning and Design institute (CMPDIL).
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.	Being Complied. A separate full-fledged Human Resource Development Deptt. Is conducting regular training programme on these issues. Apart from this Vocational Training Centers are existing in all the Areas of BCCL which provide periodical training on the safety and occupational health issue to each of the workers working in the mines.
x	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.	Initial Medical Examination (IME) and Periodical Medical Examination (PME) of all the personnel is carried out as per the Statutes and Director General of Mines Safety (DGMS) guideline.
xi	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.	A full-fledged Environment Department, headed by a HoD (Environment) along with a suitable qualified multidisciplinary team of executives which includes Environment, Mining, Excavation, Civil, Survey ,Electrical & mechanical, Forestry disciplines executives and technicians has been established in Headquarters. They are also trained in ecological restoration, sustainable development, rainwater harvesting methods etc. At the project level, one Executive in each area has also been nominated as Project Nodal Officer (Environment) and is also entrusted with the responsibility of compliance and observance of the environmental Acts/Laws including environment protection measures .The activities are monitored on regular basis at Area and at Head quarters levels. GM (Environment) at head quarter level, co-ordinates with all the Areas and reports to the Director (Technical) and in turn he reports to the CMD of the company.

		The team is multidisciplinary and very much motivated under the guidance of company's Director (Technical) and CMD. Further capacity building at both corporate and operating level is being done.
xii	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.	A separate fund under the environmental protection measures has already been allocated.
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. Advert in local newspaper is enclosed as annexure-G.
xiv	A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.	Complied.
xv	A copy of the environmental clearance letter shall be shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar's Office for 30 days.	Complied.
xvi	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the	Complied.

	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.	
xvii	The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB.	Being complied.
xviii	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.	Shall be complied.
xix	The Environmental statement for each financial year ending 31 March in Form – V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF by E-mail	Being Complied.
C	Other Conditions by MOEF:	
i	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Agree.
ii	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the	Agree.

<p>Environment (Protection) Act, 1986.</p> <p>The above conditions will be enforced <i>inter-alia</i>, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.</p>	<p>It is being complied.</p>
<p>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.</p>	<p>Agree.</p>

Annexure-A

BCCL



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

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

Dated 21.05.2013

To,

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

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

D/Sir,

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

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

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

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

Thanking you,

Yours faithfully,

HOD (Environment)

Annexure-B

1. CALENDER PROGRAMME FOR OB DUMPING

- Backfilling programme : (in M cu. m)

YEAR	New Akashkinari OCP	Block- IV OCP	TOTAL
2015-16	2.76	5.12	7.88
2016-17	3.52	5.24	8.76
2017-18	4.04	5.48	9.52

Annexure-C

5. FIVE YEAR ECOLOGICAL-RESTORATION PLAN OF BCCL

Year	Barora	Block-II	Govindpur	Katras	Sijua	Kusunda	PB UG	Basta-kola	Lodna	EJ	CV
	CLUSTER- I & II		CLUSTER- III	CLUSTER- IV	CLUSTER- V	CLUSTER- VI, VII VIII & XI			CLUSTER- IX	CLUSTER- X	CLUSTER- XVI & XVII
2014-15	10.80	7.40	4.00	4.60	2.00	6.00		10.00	4.80	3.56	2.00
2015-16	10.00	6.00	4.50	6.00	2.00	6.00	-	7.50	3.5	6.49	2.00
2016-17	9.50	5.00	5.00	8.00	2.00	6.00	-	7.50	3.5	3.22	2.00
Total	39.80	22.00	13.50	22.00	14.00	20.00	2.00	35.00	15.00	22.00	15.00

2.Eco – Restoration to be done through Nodal agency of Centre of Excellence programme of MoEF. (2014-15)

Sl. No.	Cluster	Name of Area	Name of the Project/Site	Location	Area in Ha	Availability of water
1.	Cluster II	Barora.	Phularitand	Adjacent of KKC – Link siding	2.50	Water will be provided from adjacent Incline(about 150m)
				Total	2.50.	
2.	Cluster II	Block-II.	Block-II.	Beside the Explosive Magazine	2.00+1.60	Water will be provided from adjacent Pipeline which is feeding water to filter plant(about 150m)
				Total	3.60.	
3.	Cluster-III	Govindpur	Akashkinaree	Beside the Explosive Magazine	4.0	Water is being provided by water tankers into the site reservoir which has been constructed for this purpose
				Total	4.0	
4.	Cluster IV	Katras.	AKWMC OCP.	1. Near Explosive Magazine.	3.40	Water will be provided from adjacent Pipeline which is feeding water to adjacent colony. (about 450m)
				Total	3.40	
5.	Cluster VI	Kusunda.	Khas Kusunda	Ghanudih	2.00	Water will be provided from nearby CHP water spraying point (about 350m)
				Total	2.00.	
6.	Cluster IX	Lodna.	North Tisra & South Tisra	Beside temporary R & R Site / In front of Work shop.	6.00	Water will be provided from proposed R&R site(about 200m)
				Total	6.00	
7.	Cluster X	EJ (Bhowra & Sudamdih).	Bhowra(South)	1. OB dump of water pumping plant of Bhowra(south) 3 pit OCP	8.73.	Water will be provided from river side pump (already in operation). About 800m pipe is require.
				Total	8.73.	

		W.J.Area	Murulidih colliery		4.20	Water will be provided from adjacent Pipeline which is feeding water to adjacent colony. (about 500m)
				Total	4.20	
9.	cluster VII & VIII	Bastacola.	South Jharia/ R.O.C.P	above the Bank of Chatkari Jore	10.00	Water will be provided from adjacent jore or a bore well may be installed.
					10.00	
10.	Cluster XVI	C.V.Area	Abundant Junkundar OCP.	Embankment of Junkundar	13.00	Water will be provided from pond

Annexure- E

CSR ACTIVITIES OF BCCL

Bharat Coking Coal Limited (BCCL) is committed to good corporate citizenship and makes constant efforts to build and nurture long lasting relationships with members of the society in general and it's peripheral communities in particular.

BCCL is taking up activities from the HQ level and through its administrative areas for the implementation of CSR activities. For this purpose A CSR cell is functioning which is headed by General Manger (Welfare) under the direct control of Director (Personnel) of the company.

The CSR activities are specific to the village, depending on the need assessed for the people by local Hon'ble M.Ps and M.L.As. Further as suggested by the MOEF Committee, a detailed project specific CSR Action Plan shall be formulated and for this purpose, BCCL has approached TATA INSTITUTE AND SOCIAL SCIENCES, MUMBAI which is also the focal agency of the National CSR Hub. CSR Action Plan shall be formulated for the whole Jharia Coalfield and also project-wise which will include need-based/ stakeholder base line survey, monitoring, evaluation, auditing, etc.

The CSR activities presently being done by BCCL

- To meet the acute shortage of drinking water in peripheral villages' drinking Water is provided through deep borewells, tubewells, pumps/motors, in the peripheral villages of BCCL. Water supply through pipeline, through water tanker is provided also to the villages.
- **Education:** BCCL adopts a multi-pronged approach to promote quality education in backward areas. The measures taken by BCCL comprise Construction, Extension, and Renovation of school buildings etc are done to promote quality education in the nearby villages. BCCL is Extending financial aid for educational facilities to 83 nos. Private Committee Managed schools. Measures are taken to promote women literacy and carrier development.
- **Health Care:** BCCL Conducts medical/health camps for dwellers of peripheral villages for rendering free medical consultancy. CSR Clinics, wellness clinics, artificial limbs centers are organized for the benefit of the needy section of the society.. Mobile medical vans are deployed as special arrangement for medical services. AIDS awareness camps are organized as special drive to develop awareness and to render free consultancy.
- **Occupational health:** awareness programme are organized.
- **Other Welfare Activities:** this includes Construction / renovation of Community Halls, construction / repair of roads, construction of Health-sub centres, construction of drain, construction of Chhat Ghat in the ponds, Construction of Boundary wall, providing Choupal for community gatherings, Installation of road side Water Kiosks during summer etc.
- **Mashla Chakki centres:** Mashla Chakki centres are established with machines to promote self-employment.
- **Blankets:** During winter, Blankets are distributed among poor section of the society.
- **Sports & Cultural:** Various activities are organized to propagate sports and cultures. Sports/games items and instruments are also provided. To promote sports, children parks are constructed.
- **Village adoption:** Lahbera – A SC/ST village in Dhanbad has been adopted for its all round development and a number of development activities have been carried out.

- **Skill development training programs by BCCL for Project Affected persons, fire affected persons and nearby communities:** Bharat Coking Coal Limited (BCCL) has signed a Memorandum of Understanding with Construction Industry Development Council (CIDC), New Delhi, a body promoted by Planning Commission, on 20.03.2012 for employment linked training program in the Construction Sector for poor and downtrodden people of the Jharia coalfield including project affected persons and fire affected people. BCCL in coordination with the CIDC is identifying the project affected persons to undergo the required training programs to be conducted by CIDC.

In this regard BCCL will bear the training cost @ Rs.42960/ per candidate which includes all expenses including lodging and boarding and after training the CIDC has to ensure a minimum of 75 % of sustainable placement for a period of six months. In case of placement below 75%, pro rata payment is to be made. All training are mandatorily residential. In the year 2012-13 5000 youths will be trained and in the subsequent years no. Of trainees will be scaled up @ 15% per annum.

बजट में व्यवस्थितता पर कोई ध्यान नहीं दिया गया है। लोगों को भी इससे कोई फायदा नहीं है।

लोक सुनवाई की सूचना

राज्य सरकार एवं राजधानी मंत्रालय, भारत सरकार द्वारा बिहार राज्य के अन्तर्गत राष्ट्रीय राजमार्ग संख्या-30A कमुला-बाढ़ चक्रे को दो लेन वाली घटती सहित चौकीकरण परियोजना का प्रस्ताव है। इसकी कुल लम्बाई लगभग 72.500 कि.मी. है। यह प्रस्ताव पटना जिला के कमुला से आरम्भ होकर सोनपुर जिला के बरहौ, दरभंगा होते हुए बाढ़ (बेतवा) तक जायेगा। इस राजमार्ग में तीन बाहरीयों अर्थात् दरभंगा, सुपौल एवं बाढ़ में परिवर्तित है। इससे अतिरिक्त इसमें सुपौल, मुजफ्फर, भूमिगत मार्ग, लकड़वा स्लैब एवं दो लेन पोता आदि की व्यवस्था होगी। परियोजना की कुल लागत 420.20 करोड़ है। इस परियोजना में जोड़े राष्ट्रीय राजमार्ग बनाने का प्रस्ताव नहीं है।

परियोजना एवं उसी मंत्रालय, भारत सरकार के पर्यावरणीय प्रभाव मूल्यांकन (एआईए) अंतिम रूप में, 2006 एवं उसके बाद के अंतिम अंतिम मूल्यांकन की जाँच में प्रस्तावित योजना की पर्यावरणीय स्वीकृति हेतु ईआईए रिपोर्ट तैयार किया गया है, जिसमें राजधानी-सुपौल की नियन्त्रण हेतु उपाय दर्शाये गये हैं। ईआईए प्रतिवेदन एवं ईआईए सार-संक्षेप को संबंधित निम्नलिखित जिला पंचायत एवं महाप्रखण्ड जिला प्रमुख के कार्यालयों के साथ-साथ पर्यावरण मंत्रालय, पटना में कार्यालय कार्य दिवस के दौरान देखी जा सकती है। ऐसे व्यक्ति जो इस परियोजना से प्रभावित होने वाले हैं, अपना सूचना/प्रतिक्रिया इस सूचना के प्रकाशित होने के 30 दिनों के अन्दर पर्यावरण को प्रभावित कर सकते हैं।

सम्बन्धी जनता की प्रतिनिधित्व/सुझाव आमंत्रित करने हेतु लोक सुनवाई कार्यक्रम निम्नवत है:-

दिनांक	समय	लोक-सुनवाई का स्थल
05.04.2013 (शुक्रवार)	3:00 बजे उपरान्त	प्रखण्ड कार्यालय, हजारी, सोनपुर
06.04.2013 (शनिवार)	3:00 बजे उपरान्त	प्रखण्ड कार्यालय, बाढ़, पटना

सभी संबंधित से अनुरोध है कि उपरोक्त कार्यक्रम में उपस्थित होने का कष्ट करें।

सदस्य-सचिव
बिहार राज्य प्रदूषण नियंत्रण पण्डित
बैंगलूर मन्च, शास्त्रीनगर, पटना - 800 023
दूरभाष नं०-0612-2281250/2282055, फैक्स-0612-2281050
वेबसाइट-<http://bapcb.bihar.gov.in>

राजस्थान राज्य प्रदूषण नियंत्रण मण्डल

18, आजाद नगर, पन्नाधाय सड़क, भीलवाड़ा

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NORTH EASTERN RAILWAY

Notification No.-23/2013

IMPORTANT NOTICE FOR THE RAIL PASSENGERS

It is notified for the information of general public that provision of one additional AC-2 Tier coach in train no. 18191/18192 Chhapra-Kanpur Anwarangal Utsarg Express, notified earlier vide this office Notification No. 108/2012 dated 21.12.2012, is being further extended on experimental basis as under:-

Train No. & Name	Station	From	Originating Date	Last Date
18191 Chhapra-Kanpur Anwarangal Utsarg Exp	Chhapra		01-03-13	30-06-13
18192 Kanpur Anwarangal-Chhapra Utsarg Exp	Kanpur Anwarangal		02-03-13	01-07-13

CPRO/T-104 Chief Pass Trans., Manager, Gorakhpur

Railway Vigilance Mobile Helpline No. 8551-155210 (for Complaints regarding Corruption)

"SERVING CUSTOMERS WITH A SMILE"

Bharat Coking Coal Limited

(A Subsidiary of Coal India Limited)

This is to bring into notice of all concerned that the following 09 (nine) Clusters of BCCIL consisting of 63 Mines and 02 washeries are granted Environmental Clearances by Ministry of Environmental and forests.

Sl. No.	Name of the Cluster	Sanction order number and date
1.	Cluster-I (Damodar Group of 3 Mines - Damodar (Abir Section) OCP, Damodar U/S/P and Damodar-BJ Section OCP) Group of Mines (or 0.3 MTPA normative and 1.17 MTPA peak) in a combined ML area of 575 ha) of M/s. Bharat Coking Coal Ltd., located in Jharia Coalfields, Block Chandrapur, Dist. Dhanbad, Jharkhand.	J-11015/93/2009-1A.II (M) dated 08th Feb. 2013
2.	Cluster-II (5 mines of a combined prod. capacity 15.55 MTPA with a peak production of 20.215 MTPA) in a combined ML area of 2025.71 ha) of M/s. Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand.	J-11015/53/2011-1A.II (M) dated 8th Feb. 2013
3.	Cluster-III (7 mines of a peak production of 3.0 MTPA in a combined ML area of 1420.61 ha) of M/s. Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand (EC based on TOR granted on 04.11.2010).	J-11015/213/2010-1A.II (M) dated 8th Feb. 2013
4.	Cluster-IV (6 mines with production capacity 2.851 MTPA (Normative), 3.700 MTPA (Peak)) in a combined ML area of 1123.79 ha) of M/s. Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand excluding Gailand Colliery UG.	J-11015/212/2010-1A.II (M) dated 8th Feb. 2013
5.	Cluster-V (7 mines of a 4.854 (Normative) and 6.311 (Peak) production of MTPA in a combined ML area of 1957.08 ha) of M/s. Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand (EC based on TOR granted on 18.05.2011).	J-11015/10/2011-1A.II (M) dated 11th Feb. 2013
6.	Cluster-VII (combined capacity 6.227 MTPA with a peak prodn. of 9.10 MTPA) in a combined ML area of 2127.7 ha) of M/s. Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand (EC based on TOR granted on 09.12.2010) (excluding Kustoni UG and East Bhugaddi).	J-11015/238/2010-1A.II (M) dated 8th Feb. 2013
7.	Cluster-X (6 mines of 1.762 MTPA of normative and peak production of 2.289 MTPA in a combined ML area of 2057.95 ha) and Sudamdih Coal Washery (Within the leasehold of Sudamdih Shah Mine) of 1.6 MTPA of normative and 2.05 MTPA peak production for a area of 18 ha) of M/s. Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand (EC based on TOR granted on 05.02.2011).	J-11015/390/2010-1A.II (M) dated 8th Feb. 2013
8.	Cluster-XVI - Coalmines (Dahibari-Basantnagar OCP, Basantnagar Under Ground Mine, New Laikdih OCP (including Dahibari Coal Washery), Laikdih Deep UG, Chanch UG) (normative 1.53 MTPA and 1.983 MTPA peak in a combined ML area of 1964.21 ha) and Dahibari washery of 1.6 MTPA in the area of 12 ha of M/s. Bharat Coking Coal Ltd., in Dist. Jharkhand, Jharkhand (EC based on TOR granted on 28.05.2010).	J-11015/185/2010-1A.II (M) dated 8th Feb. 2013
9.	Cluster-VIII Group of 10 Mines (combined capacity 4.31 MTPA with a peak prodn. of 5.603 MTPA in a combined ML area of 1183.92 ha (100.41 ha-169 ha-183.92 ha) of M/s. Bharat Coking Coal Ltd., located in Jharia Coalfields, Dist. Dhanbad, Jharkhand.	J-11015/208/2010-1A.II (M) dated 15th Feb. 2013

The copy of the clearance letter is available with the Jharkhand State Pollution Control Board and may also be seen at the website of the Ministry of Environmental and forests at <http://envfor.nic.in> and on the official website of BCCIL at <http://www.bccil.gov.in>

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The information given in this report is not to be communicated either directly or indirectly to the press or to any person not holding an official position in the CIL / GOVERNMENT.

**ENVIRONMENTAL MONITORING REPORT
OF
BHARAT COKING COAL LIMITED,
CLUSTER – III**

(FOR THE Q.E. MARCH, 2016)

E. C. no. J-11015/213/2010-IA.II (M) dated 06.02.2013.

June, 2016



CMPDI

ISO 9001 Company
Regional Institute-II
Dhanbad, Jharkhand

CLUSTER - III

(FOR THE Q.E. March, 2016)

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ISO 9001 Company
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Dhanbad, Jharkhand

EXECUTIVE SUMMARY

1.0 Introduction

The purpose of environmental monitoring is to assess the quality of various attributes that affects the fauna and flora. In accordance with the quality of these attributes appropriate strategy is to be developed to control the pollution level within the permissible limits. The three major attributes are air, water and noise level.

Bharat Coking Coal Limited (BCCL), a Subsidiary company of Coal India Limited is operating Underground and Opencast Mines in Jharia Coalfield (JCF) is a part of Gondwana Coalfields located in Dhanbad district of Jharkhand, the JCF is bounded by 23°37' N to 23°52' N latitudes and 86°09' E to 86°30' E longitude occupying an area of 450 Sq.km. BCCL has awarded Environmental monitoring work of Jharia Coalfield (JCF) to Central Mine Planning & Design Institute Limited (CMPDIL). The environmental monitoring has been carried out as per the conditions laid down by the MoEF&CC while granting environmental clearance of project, consent letter issued by the respective SPCB, and other statutory requirements.

2.0 Sampling location and rationale

2.1 Ambient air sampling locations

The ambient air quality monitoring stations were selected to represent core, buffer zone area. The rationale has been based on the guidelines stipulated by MoEF&CC, consent letter of SPCB, as well as other statutory requirements.

2.2 Water sampling stations

The Water sampling stations were selected for mine sump water, drinking water supply, well/ Hand pump water also surface water samples.

2.3 Noise level monitoring locations

Noise levels vary depending on the various activities in mining areas. The monitoring of noise level in different locations will be helpful to take appropriate mitigating measures. The noise levels were recorded in mining area, washery and in residential area.

3.0 Methodology of sampling and analysis

3.1 Ambient air quality

Parameters chosen for assessment of ambient air quality were Particulate Matter (PM₁₀), Fine Particulate Matter (PM_{2.5}), Sulphur Di-oxide (SO₂) and Nitrogen Oxides (NO_x). Respirable Dust Samplers (RDS) and Fine Dust Sampler (PM_{2.5} sampler) were used for sampling of PM₁₀, SO₂, & NO_x and Fine Dust Sampler (PM_{2.5} sampler) were used for

sampling of PM_{2.5} at 24 hours interval once in a fortnight and the same for the gaseous pollutants. The samples were analysed in Environmental Laboratory of CMPDI, RI-I, Asansol.

3.2 Water quality

Water samples were collected as per standard practice. The Mine effluent samples were collected and analysed for four parameters on fortnightly basis. Mine Effluent samples were also analysed for 27 parameters on half-yearly basis. The drinking and Surface water samples were collected and analysed for 25 and 27 parameters respectively, on quarterly basis. Thereafter the samples were preserved and analysed at the Environmental Laboratory at CMPDI (HQ), Ranchi.

3.3 Noise level monitoring

Noise level measurements in form of 'L_{EQ}' were taken using Integrated Data Logging Sound Level Meter. Noise levels were measured in Decibels, 'A' weighted average, i.e. dB(A).

4.0 Results and interpretations

4.1 Air quality

It has been seen from the analysis results that the 24 hours average concentration parameters like PM₁₀, PM_{2.5}, SO₂ and NO_x are mostly within the permissible limits in all sampling locations as per MoEF&CC Gazette Notification No. GSR 742(E) dt 25.09.2000 Standards for Coal Mines and National Ambient Air Quality Standard -2009. Sometimes the concentration of PM₁₀ & PM_{2.5} exceeds the limits due to heavy public traffic, poor road condition, coke oven plants, burning of coal by surrounding habitants, brick making, municipal waste dumps and industries like Steel Plant, thermal Plants including their fly ash etc.

4.2 Water quality

The test results indicate that the major parameters compared with MoEF&CC Gazette Notification No. GSR 742(E) dt 25.09.2000 Standards for Coal Mines, IS.10500/2012 (Drinking water) and IS: 2296 (Surface water), are within permissible limits.

4.3 Noise Level

During the noise level survey it has been observed that the noise level in the sampling locations is within the permissible limits prescribed as per MoEF&CC Gazette Notification No. GSR 742(E) dt 25.09.2000 Standards for Coal Mines for Industrial Area and Noise pollution (Regulation and Control) Rules, 2000.

CHAPTER - I

INTRODUCTION

- 1.0 Any industry and development activities including coal mining is bound to affect environmental attributes. There are positive as well as negative impacts of such operations. For controlling the adverse impacts a regular monitoring is essential. The environmental monitoring is being done as per the guide-lines stipulated by Ministry of Environment, Forest and Climate Change (MoEF&CC), Govt. of India.

The very purpose of environmental monitoring is to assess the quality of various attributes which affects the environment. As per quality of these attributes appropriate strategy is to be developed to control the pollution level within the permissible limits. The three major attributes are air, water and noise level.

Bharat Coking Coal Limited (BCCL), a subsidiary company of Coal India Limited (CIL) is operating UG Mines and Opencast Mines in Jharia Coalfield (JCF). The Jharia Coalfield (JCF) having an area of 450 Sq.KM.

Bharat Coking Coal has awarded Environmental Monitoring work of all Projects, Cluster wise, to Central Mine Planning & Design Institute Limited (CMPDIL). The environmental monitoring has been carried out as per conditions laid down by MoEF&CC while granting environmental clearance to different projects. CMPDI has trained manpower and well equipped laboratory to carry out monitoring, analysis and R&D work in the field of environment.

- 1.1 The CLUSTER III is in the westernmost part of the Jharia coalfield. It includes Jogidih Colliery, Maheshpur Colliery, South Govindpur Colliery, Teturiya Colliery, Govindpur Colliery, New Akasshkinaree Mine and Block IV Kooridih Mixed Mine. The cluster – III is situated about 40 - 45 kms from Dhanbad Railway Station. The mines of this cluster - III are operating since pre nationalization period (prior to 1972-73). It is connected by both Railway and Road. The drainage of the area is governed by Khudia and Bagdighi Nala.
- 1.2 The Project has Environmental Clearance from Ministry of Environment, Forest and Climate Change (MoEF&CC) for a rated capacity of 2.769 MTPA (normative) and 3.6 MTPA peak capacity of coal production vide letter no **E. C. no. J-11015/213/2010-IA.II (M) dated 06.02.2013.**

Ministry of Environment, Forest and Climate Change while granting environmental clearance has given one of the General conditions that “ Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for PM₁₀, PM_{2.5}, SO₂, NO_x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.” And other conditions regarding water / effluent and noise level monitoring.

In compliance of these conditions the Environmental Monitoring has been carried out & report prepared for submission to MoEF&CC & JSPCB and other statutory authorities.

.....

CHAPTER-II

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) Block IV Kooridih OCP (A6): Industrial Area

The location of the sampling station is 23° 47.916' N 86° 15.333' E. The sampler was placed at ground level near Safety office of Block IV OCP. The station was selected to represent the impact of mining activities of Block IV, poor roads condition, heavy public traffic, burning of coal by the surrounding habitants.

II. BUFFER ZONE Monitoring Location

i) Muraidiah OCP (A5): Industrial Area

The sampler was placed at ground level at Shatabdi Colliery.

ii) Govindpur Village/Ramkanali (A7): Industrial Area

The location of the sampling station is 23° 48'34" N 86° 18'22" E. The sampler was placed at ground level at AARC agent Office, Ramkanali.

iii) Kharkharee CISF Office (A21): Industrial Area

2.2 Methodology of sampling and analysis

Parameters chosen for assessment of ambient air quality were Particulate Matter (PM₁₀), Particulate Matter (PM_{2.5}), Sulphur Di-oxide (SO₂) and Nitrogen Oxides (NO_x). Respirable Dust Samplers (RDS) & fine particulates sampler were used for sampling PM₁₀ & PM_{2.5} respectively at 24 hours interval once in a fortnight and the same for the gaseous pollutants. The samples were analysed in Environmental Laboratory of CMPDI, RI-I, Asansol.

2.3 Results & Interpretations

The results of Ambient Air Quality are presented in tabular form along with Bar chart for each monitoring station. The interpretations of different parameters are given below:

2.3.1 Ambient air quality

Particulate Matter PM₁₀

In **core zone** under **Industrial area** varies from 82 to 93 μm^3 .

In **buffer zone** in **Industrial area** varies from 68 to 96 μm^3

Particulate Matter PM_{2.5}

In **core zone** under **Industrial area** varies from 31 to 48 μm^3 .

In **buffer zone** in **Industrial area** varies from 34 to 50 μm^3

Sulphur Dioxide:

In **core zone** under **Industrial area** varies from 10 to 12 μm^3 .

In **buffer zone** in **Industrial area** varies from 10 to 12 μm^3

Oxides of Nitrogen:

In **core zone** under **Industrial area** varies from 19 to 28 μm^3 .

In **buffer zone** in **Industrial area** varies from 18 to 28 μm^3 .

AMBIENT AIR QUALITY DATA

Name of the Company: **Bharat Coking Coal limited**

Year : **2015-16.**

Name of the Cluster : **Cluster – II**

Q.E.: **March' 2016**

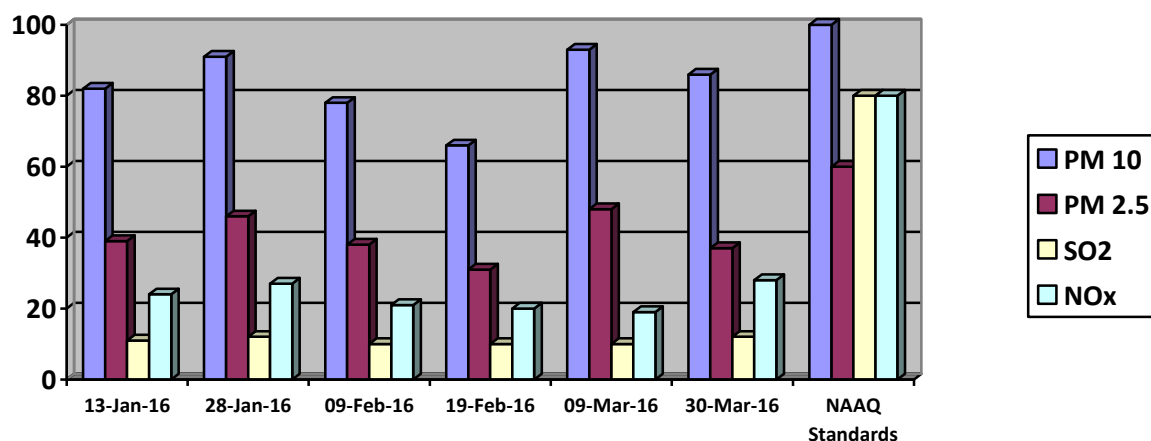
Station Code/Name: (a) A6 Block IV Kooridih OCP

Category: Industrial.

ZONE: CORE

(a). Station Code/Name: A6 Block IV Kooridih OCP Category: Industrial¹.

Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	13 - Jan -16	82	39	11	24
2	28 - Jan - 16	91	46	12	27
3	09 - Feb -16	78	38	<10.0	21
4	19 - Feb - 16	66	31	<10.0	20
5	09 - Mar - 16	93	48	<10.0	19
6	30 - Mar - 16	86	37	12	28
NAAQ Standards		100	60	80	80




Trace Metal analysis report of Ambient Air Quality

Parameters	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Mercury (Hg)	Nickel (Ni)	Lead (Pb)
Concentration(µg/m ³)	<0.005	<0.001	<0.01	<0.001	<0.01	<0.005

Note:

➤ All values are expressed in microgram per cubic meter.

¹ Report released by Shri Indranil De, Manager (Env), CMPDI, RI-1, Asansol, Signed..........Dated 28.05.2016. Job No. 110310

AMBIENT AIR QUALITY DATA

Name of the Company: **Bharat Coking Coal limited**

Year : **2015-16.**

Name of the Cluster : **Cluster – III**

Q.E.: **March' 2016**

Station Code/Name: **(a) A5 – Muraidih OCP**

Category:

(b) A7- Govindpur, Ramkanali

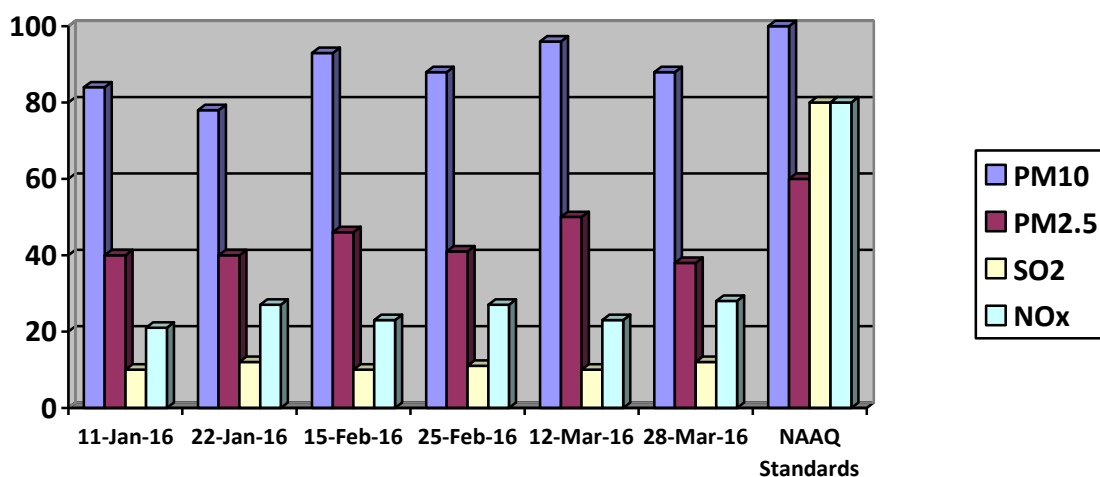
Industrial.

(c) A21- KharKharee CISF Office

ZONE: BUFFER

(a) Station Code/Name: A5 – Muraidih OCP, Category: Industrial².

Sl. No.	Date	PM ₁₀	PM _{2.5}	SO ₂	NO _x
1	11 - Jan - 16	84	40	<10.0	21
2	22 - Jan - 16	78	40	12	27
3	15 - Feb - 16	93	46	<10.0	23
4	25 - Feb - 16	88	41	11	27
5	12 - Mar - 16	96	50	<10.0	23
6	28 - Mar - 16	88	38	12	28
	NAAQ Standards	100	60	80	80




Trace Metal analysis report of Ambient Air Quality

Parameters	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Mercury (Hg)	Nickel (Ni)	Lead (Pb)
Concentration(µg/m ³)	<0.005	<0.001	<0.01	<0.001	<0.01	<0.005

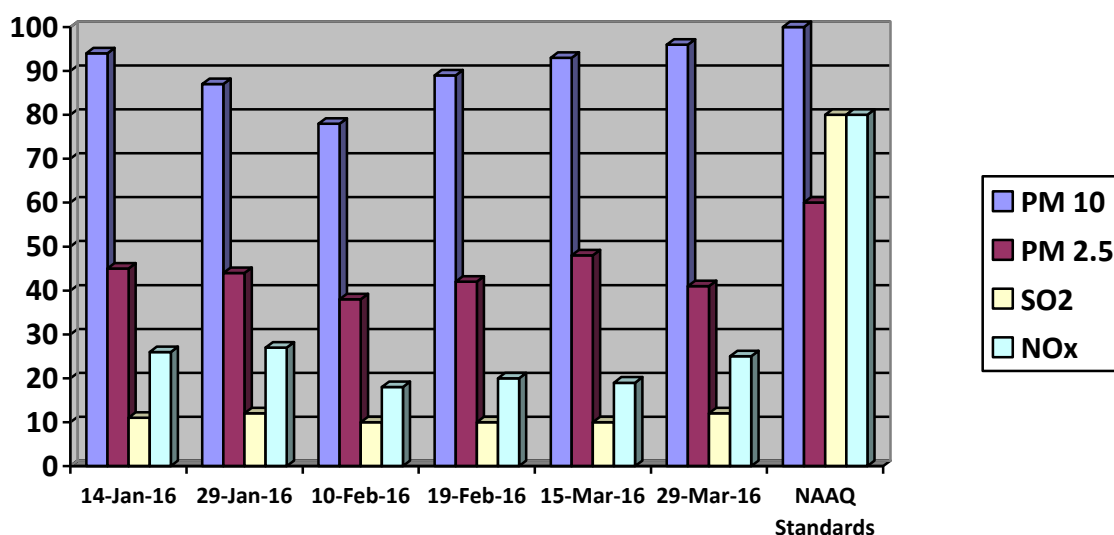
Note:

➤ All values are expressed in microgram per cubic meter.

² Report released by Shri Indranil De, Manager (Env), CMPDI, RI-1, Asansol, Signed..........Dated 28.05.2016. Job No. 110310

(b). Station Code/Name: A7 – Govindpur, Ramkanali, Category: Industrial³.

Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	14 - Jan -16	94	45	11	26
2	29 - Jan - 16	87	44	12	27
3	10 - Feb -16	78	38	<10.0	18
4	19 - Feb - 16	89	42	<10.0	20
5	15 - Mar - 16	93	48	<10.0	19
6	29 - Mar - 16	96	41	12	25
	NAAQ Standards	100	60	80	80




Trace Metal analysis report of Ambient Air Quality

Parameters	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Mercury (Hg)	Nickel (Ni)	Lead (Pb)
Concentration(µg/m ³)	<0.005	<0.001	<0.01	<0.001	<0.01	<0.005

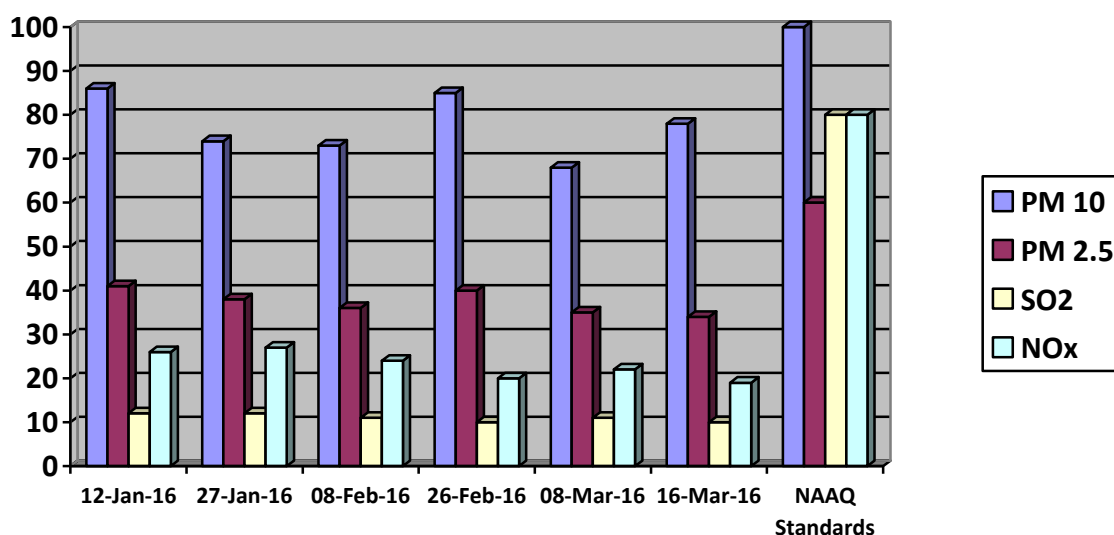
Note:

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

³ Report released by Shri Indranil De, Manager (Env), CMPDI, RI-1, Asansol, Signed..........Dated 28.05.2016. Job No. 110310

(c). Station Code/Name: A21 – KharKharee CISF Office, Category: Industrial⁴.

Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	12 - Jan - 16	86	41	12	26
2	27 - Jan - 16	74	38	12	27
3	08 - Feb - 16	73	36	11	24
4	26 - Feb - 16	85	40	<10.0	20
5	08 - Mar - 16	68	35	11	22
6	16 - Mar - 16	78	34	<10.0	19
	NAAQ Standards	100	60	80	80



Trace Metal analysis report of Ambient Air Quality

Parameters	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Mercury (Hg)	Nickel (Ni)	Lead (Pb)
Concentration(µg/m ³)	<0.005	<0.001	<0.01	<0.001	<0.01	<0.005

Note:

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


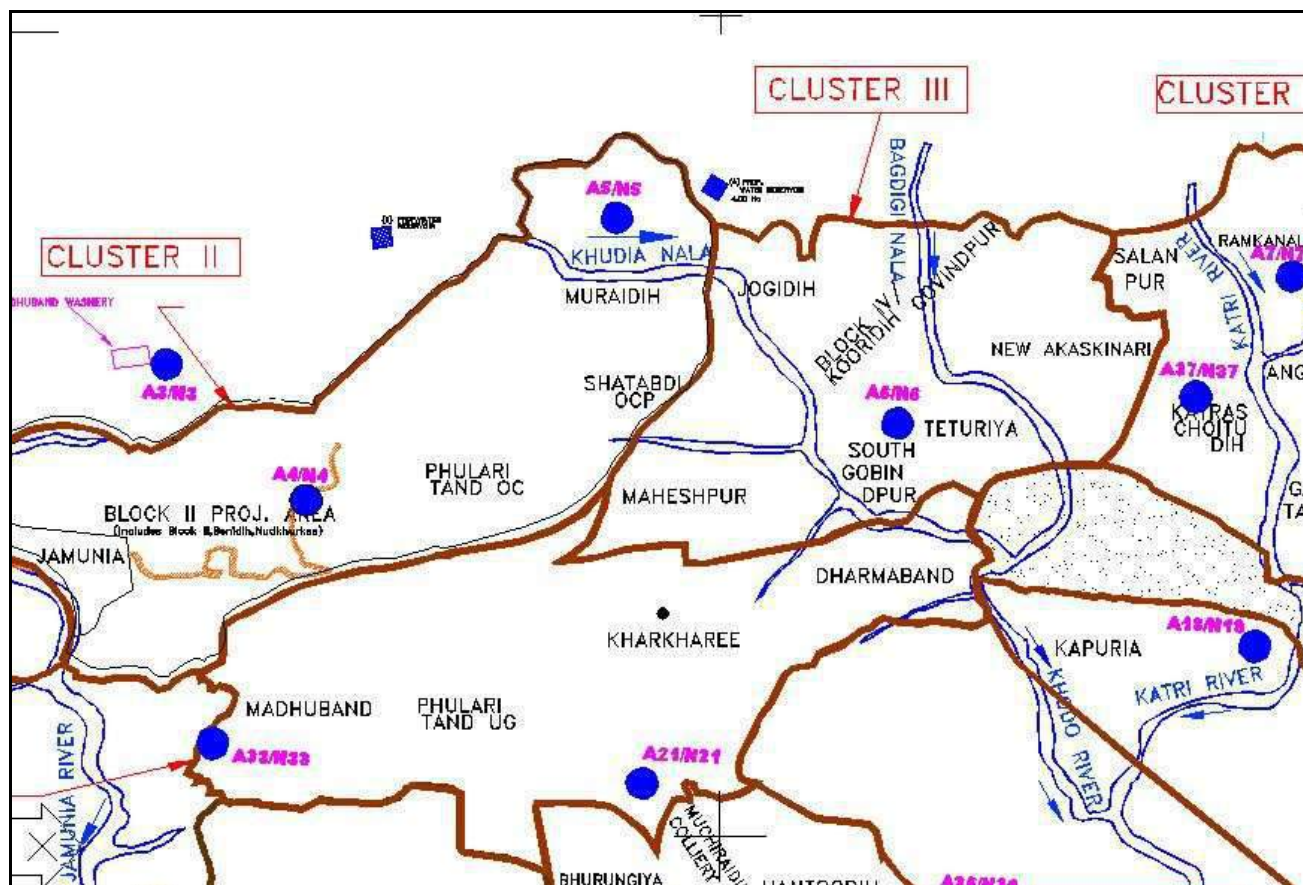
⁴ Report released by Shri Indranil De, Manager (Env), CMPDI, RI-1, Asansol, Signed..........Dated 28.05.2016. Job No. 110310

Plate No. I: Ambient Air Monitoring Stations in Cluster- III in Core & Buffer Zones



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 m^3/minute)
	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.Improved west 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 clause 2.

** 24 hourly / 8 hourly values shall be met 92% of the time in a year. However, 8% of the time it may exceed but not on two consecutive days.

NATIONAL AMBIENT AIR QUALITY STANDARDS

New Delhi the 18th November 2009

In exercise of the powers conferred by Sub-section (2) (h) of section 16 of the Air (Prevention and Control of Pollution) Act, 1981 (Act No. 14 of 1981), and in supersession of the notification No(s).S.O.384(E), dated 11th April 1994 and S.O.935(E), dated 14th October 1998, the Central Pollution Control Board hereby notify the National Ambient Air Quality Standards with immediate effect

Pollutant	Time Weighted Average	Concentration in Ambient Air		Methods of Measurement
		Industrial, Residential, Rural and other Areas	Ecologically Sensitive Area (Notified by Central Government)	
Sulphur Dioxide (SO₂), µg/m³	Annual * 24 Hours **	50 80	20 80	-Improved West and Gaeke Method -Ultraviolet Fluorescence
Nitrogen dioxide (NO₂), µg/m³	Annual * 24 Hours **	40 80	30 80	-Jacob & Hochheiser modified (NaOH-NaAsO ₂) Method -Gas Phase Chemiluminescence
Particulate Matter (Size less than 10µm) or PM₁₀, µg/m³	Annual * 24 Hours **	60 100	60 100	-Gravimetric -TEOM -Beta attenuation
Particulate Matter (Size less than 2.5µm) or PM_{2.5}, µg/m³	Annual * 24 Hours **	40 60	40 60	-Gravimetric -TEOM -Beta attenuation
Ozone (O₃), µg/m³	8 Hours * 1 Hour **	100 180	100 180	-UV Photometric -Chemiluminescence -Chemical Method
Lead (Pb), µg/m³	Annual * 24 Hours **	0.50 1.0	0.50 1.0	-AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper -ED-XRF using Teflon filter
Carbon Monoxide (CO), mg/m³	8 Hours ** 1 Hour **	02 04	02 04	-Non dispersive Infrared (NDIR) Spectroscopy
Ammonia (NH₃), µg/m³	Annual * 24 Hours **	100 400	100 400	-Chemiluminescence -Indophenol blue method
Benzene (C₆H₆), µg/m³	Annual *	05	05	-Gas Chromatography (GC) based continuous analyzer -Adsorption and desorption followed by GC analysis
Benzo(a)Pyrene (BaP) Particulate phase only, ng/m³	Annual *	01	01	-Solvent extraction followed by HPLC/GC analysis
Arsenic (As), ng/m³	Annual *	06	06	-AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper
Nickel (Ni), ng/m³	Annual *	20	20	-AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper

* Annual Arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

NOTE: Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigations.

CHAPTER – III

WATER QUALITY MONITORING

3.1 Location of sampling sites

(Refer **Plate No. - II**)

i) **Mine Discharge of Govindpur Colliery (MW3)**

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

ii) **Drinking Water quality at Jogidih Village (DW3)**

iii) **Surface water quality at U/S of Khudia nalla (SW4)**

iv) **Surface water quality at D/S of Khudia nalla (SW5)**

v) **Surface water quality at U/S of Bagdigih nalla (SW6)**

vi) **Surface water quality at D/S of Bagdigih nalla (SW6)**

3.2 Methodology of sampling and analysis

Water samples were collected as per standard practice. The effluent samples were collected and analysed for four parameters on fortnightly basis. Effluent samples were also analysed for 27 parameters on half-yearly basis. The drinking and Surface water samples were collected and analysed for 25 and 17 parameters respectively, on quarterly basis. Thereafter the samples were preserved and analysed at the Environmental Laboratory at CMPDI (HQ), Ranchi.

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)

Name of the Company: **Bharat Coking Coal Limited** Year : **2015-16.**

Name of the Project: **Cluster - III**

Month: **January, 2016.**

Name of the Stations & Code :

Mine Discharge of Govindpur Colliery (MW3)

a. First Fortnight

Sl. No.	Parameters	MW3 (Mine Discharge)	As per MOEF General Standards for schedule VI
		01.01.2016	
1	Total Suspended Solids	38	100 (Max)
2	pH	7.87	5.5 - 9.0
3	Oil & Grease	<2.0	10 (Max)
4	COD	28	250 (Max)

b. Second Fortnight

Sl. No.	Parameters	MW3 (Mine Discharge)	As per MOEF General Standards for schedule VI
		25.01.2016	
1	Total Suspended Solids	42	100 (Max)
2	pH	8.09	5.5 - 9.0
3	Oil & Grease	<2.0	10 (Max)
4	COD	28	250 (Max)

All values are expressed in mg/lit unless specified.


Analysed By


Dy. Technical Manager
Env. Lab, CMPDI(HQ)
(Authorized Signatory)

WATER QUALITY DATA

(Effluent Water)

Name of the Company: **Bharat Coking Coal Limited** Year : **2015-16.**

Name of the Project: **Cluster - III**

Month: **February, 2016.**

Name of the Stations & Code :

Mine Discharge of Govindpur Colliery (MW3)

a. First Fortnight

Sl. No.	Parameters	MW3 (Mine Discharge)	As per MOEF General Standards for schedule VI
		09.02.2016	
1	Total Suspended Solids	68	100 (Max)
2	pH	7.62	5.5 - 9.0
3	Oil & Grease	<2.0	10 (Max)
4	COD	32	250 (Max)

b. Second Fortnight

Sl. No.	Parameters	MW3 (Mine Discharge)	As per MOEF General Standards for schedule VI
		20.02.2016	
1	Total Suspended Solids	48	100 (Max)
2	pH	7.57	5.5 - 9.0
3	Oil & Grease	<2.0	10 (Max)
4	COD	28	250 (Max)

All values are expressed in mg/lit unless specified.


Analysed By


18/5/16
Dy. Technical Manager
Env. Lab, CMPDI(HQ)
(Authorized Signatory)

WATER QUALITY DATA

(Effluent Water)

Name of the Company: **Bharat Coking Coal Limited** Year : **2015-16.**

Name of the Project: **Cluster - III**

Month: **March, 2016.**

Name of the Stations & Code :

Mine Discharge of Govindpur Colliery (MW3)

a. First Fortnight

Sl. No.	Parameters	MW3 (Mine Discharge)	As per MOEF General Standards for schedule VI
		08.03.2016	
1	Total Suspended Solids	46	100 (Max)
2	pH	8.16	5.5 - 9.0
3	Oil & Grease	<2.0	10 (Max)
4	COD	40	250 (Max)

b. Second Fortnight

Sl. No.	Parameters	MW3 (Mine Discharge)	As per MOEF General Standards for schedule VI
		18.03.2016	
1	Total Suspended Solids	42	100 (Max)
2	pH	8.12	5.5 - 9.0
3	Oil & Grease	<2.0	10 (Max)
4	COD	32	250 (Max)

All values are expressed in mg/lit unless specified.

Analysed By

Dy. Technical Manager
Env. Lab, CMPDI(HQ)
(Authorized Signatory)

WATER QUALITY

(EFFLUENT WATER- ALL PARAMETERS)

Name of the Company: **Bharat Coking Coal Limited**

Year : **2015-16.**

Name of the Cluster: **Cluster - III**

Month: **H. E. March, 2016.**

Area : **Govindpur Colliery**

Project:
Govindpur
Colliery

Cluster III

Stations:

1. Mine Water Discharge Govindpur Colliery MW-3

Date of Sampling:
18/03/2016

Sl.No.	Parameter	Sampling Stations			Detection Limit	MOEF -SCH-VI STANDARDS Class 'A'	BIS Standard & Method
		MW-3	2	3			
1	Ammonical Nitrogen, mg/l, Max	0.45			0.02	50.0	IS 3025/34:1988, R : 2009, Nessler's
2	Arsenic (as As), mg/l, Max	<0.002			0.002	0.2	IS 3025/37:1988 R : 2003, AAS-VGA
3	B.O.D (3 days 27°C), mg/l, Max	<2.00			2.00	30.0	IS 3025 /44:1993,R:2003 3 day incubation at 27°C
4	COD, mg/l, Max	32			4.00	250.0	APHA, 22 nd Edition, Closed Reflux, Titrimetric
5	Colour	colourless			Qualitative	Qualitative	Physical/Qualitative
6	Copper (as Cu), mg/l, Max	<0.03			0.03	3.0	IS 3025/42: 1992 R : 2009, AAS-Flame
7	Dissolved Phosphate, mg/l, Max	<0.30			0.30	5.0	APHA, 22 nd Edition Molybdovanadate
8	Fluoride (as F) mg/l, Max	0.67			0.02	2.0	APHA, 22 nd Edition, SPADNS
9	Free Ammonia, mg/l, Max	<0.01			0.01	5.0	IS:3025/34:1988, Nessler's
10	Hexavalent Chromium, mg/l, Max	<0.01			0.01	0.1	APHA, 22 nd Edition, Diphenylcarbohydrazide
11	Iron (as Fe), mg/l, Max	<0.06			0.06	3.0	IS 3025 /53 : 2003, R : 2009 , AAS-Flame
12	Lead (as Pb), mg/l, Max	<0.005			0.005	0.1	APHA, 22 nd Edition, AAS-GTA
13	Manganese(as Mn), mg/l, Max	<0.02			0.02	2.0	IS-3025/59:2006, AAS-Flame
14	Nickel (as Ni), mg/l, Max	<0.10			0.10	3.0	IS-3025/54:2003, AAS-Flame
15	Nitrate Nitrogen, mg/l, Max	0.5			0.50	10.0	APHA, 22 nd Edition, UV-Spectrophotometric
16	Oil & Grease, mg/l, Max	<2.00			2.00	10.0	IS 3025/39:1991, R : 2003, Partition Gravimetric
17	Odour	Agreeable			Agreeable	Qualitative	IS-3015/5:1983/R:2012Qualitative
18	pH value	8.12			2.5	5.5 to 9.0	IS-3025/11:1983, R-1996, Electrometric
19	Phenolic compounds (as C ₆ H ₅ OH),mg/l, Max	<0.002			0.002	1.0	APHA, 22 nd Edition 4-Amino Antipyrine
20	Selenium (as Se), mg/l, Max	<0.002			0.002	0.05	APHA, 22 nd Edition, AAS-GTA
21	Sulphide (as SO ₃), mg/l, Max	<0.005			0.005	2.0	APHA, 22 nd Edition Methylene Blue
22	Temperature (°C)	36.3			Shall not exceed 5° C above the receiving temp.		IS-3025/09:1984, Thermometric
23	Total Chromium (as Cr), mg/l, Max	<0.04			0.04	2.0	IS-3025/52:2003, AAS-Flame
24	Total Kjeldahl Nitrogen, mg/l, Max	1.4			1.00	100.0	IS:3025/34:1988, Nessler's
25	Total Residual Chlorine, mg/l, Max	0.03			0.02	1.0	APHA, 22 nd Edition, DPD
26	Total Suspended Solids, mg/l, Max	42			10.00	100.0	IS 3025/17:1984, R :1996, Gravimetric
27	Zinc (as Zn), mg/l, Max	<0.01			0.01	5.0	IS 3025 /49 : 1994, R : 2009, AAS-Flame

Analysed By

Dy. Technical Manager
Env. Lab, CMPDI(HQ)
(Authorized Signatory)

WATER QUALITY

(SUFACE WATER- ALL PARAMETERS)

Name of the Company: **Bharat Coking Coal Limited**

Year : **2015-16.**

Name of the Cluster : **Cluster - III**

Month: **Q. E. March, 2016.**

Area : **Govindpur Colliery**

Project:
**Govindpur
Colliery**

Cluster III

Stations:

1. Up stream in Kudia Nala SW-4
2. Down stream in Kudia Nala SW-5
2. Upstream in Bagdigi Nala SW-6
3. Down stream in Bagdigi Nala SW-7

Date of Sampling:

10/03/2016

10/03/2016

Sl. No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		SW4	SW-5	SW-6	SW-7		
1	Arsenic (as As), mg/l, Max	<0.002	<0.002	<0.002	<0.002	0.002	IS 3025/37:1988 R : 2003, AAS-VGA
2	BOD (3 days 27°C), mg/l, Max	2.40	2.6	2.8	3.0	2.00	IS 3025 /44: 1993, R : 2003 3 day incubation at 27°C
3	Colour (Hazen Unit)	colourless	colourless	colourless	colourless	Qualitative	Physical/Qualitative
4	Chlorides (as Cl), mg/l, Max	52	64	98	104	2.00	IS-3025/32:1988, R-2007, Argentometric
5	Copper (as Cu), mg/l, Max	<0.03	<0.03	<0.03	<0.03	0.03	IS 3025 /42 : 1992 R : 2009, AAS-Flame
6	Dissolved Oxygen, min.	5.3	4.10	5.60	4.30	0.10	IS 3025/38:1989, R : 2003, Winkler Azide
7	Fluoride (as F) mg/l, Max	1.17	1.24	1.29	1.34	0.02	APHA, 22 nd Edition SPADNS
8	Hexavalent Chromium, mg/l, Max	<0.01	<0.01	<0.01	<0.01	0.01	APHA, 22 nd Edition, 1,5 - Diphenylcarbohydrazide
9	Iron (as Fe), mg/l, Max	<0.06	<0.06	<0.06	<0.06	0.06	IS 3025 /53 : 2003, R : 2009, AAS-Flame
10	Lead (as Pb), mg/l, Max	<0.005	<0.005	<0.005	<0.005	0.005	APHA, 22 nd Edition AAS-GTA
11	Nitrate (as NO ₃), mg/l, Max	13.73	15.51	3.54	5.32	0.50	APHA, 22 nd Edition, UV-Spectrophotometric
12	pH value	7.69	7.62	7.32	7.58	2.5	IS-3025/11:1983, R-1996, Electrometric
13	Phenolic compounds (as C ₆ H ₅ OH), mg/l, Max	<0.002	<0.002	<0.002	<0.002	0.002	APHA, 22 nd Edition 4-Amino Antipyrine
14	Selenium (as Se), mg/l, Max	<0.002	<0.002	<0.002	<0.002	0.002	APHA, 22 nd Edition AAS-GTA
15	Sulphate (as SO ₄) mg/l, Max	80	90	100	125	2.00	APHA, 22 nd Edition Turbidity
16	Total Dissolved Solids, mg/l, Max	296	342	304	326	25.00	IS 3025 /16:1984 R : 2006, Gravimetric
17	Zinc (as Zn), mg/l, Max	0.017	0.021	0.029	<0.01	0.01	IS 3025 /49 : 1994, R : 2009, AAS-Flame

Analysed By

Dy. Technical Manager
Env. Lab, CMPD(HQ)
(Authorized Signatory)

WATER QUALITY

(DRINKING WATER- ALL PARAMETERS)

Name of the Company: **Bharat Coking Coal Limited**

Year : **2015-16.**

Name of the Cluster : **Cluster - III**

Month: **Q. E. March, 2016.**

Area : **Govindpur Colliery**

**Project:
Govindpur
Colliery**

Cluster III

Stations:

1. Drinking Water from Jogidih Village DW-3

Date of Sampling:
09/03/2016

Sl. No	Parameter	Sampling Stations			Detection Limit	IS:10500 Drinking Water Standards	Standard / Test Method
		DW-3	2	3			
1	Boron (as B), mg/l, Max	<0.20			0.20	0.5	APHA, 22 nd Edition ,Carmin
2	Colour,in Hazen Units	3			1	5	APHA, 22 nd Edition ,Pt.-Co. Method
3	Calcium (as Ca), mg/l, Max	176			1.60	75	IS-3025/40:1991, EDTA
4	Chloride (as Cl), mg/l, Max	220			2.00	250	IS-3025/32:1988, R-2007, Argentometric
5	Copper (as Cu), mg/l, Max	<0.03			0.03	0.05	IS 3025/42 : 1992 R : 2009, AAS-Flame
6	Fluoride (as F) mg/l, Max	0.60			0.02	1.0	APHA, 22 nd Edition , SPADNS
7	Free Residual Chlorine, mg/l, Min	0.06			0.02	0.2	APHA, 22 nd Edition, DPD
8	Iron (as Fe), mg/l, Max	<0.06			0.06	0.3	IS 3025 /53 : 2003, R : 2009 , AAS-Flame
9	Lead (as Pb), mg/l, Max	<0.005			0.005	0.01	APHA, 22 nd Edition, AAS-GTA
10	Manganese (as Mn), mg/l, Max	<0.02			0.02	0.1	IS-3025/59:2006, AAS-Flame
11	Nitrate (as NO ₃), mg/l, Max	8			0.5	45	APHA, 22 nd Edition, UV-Spectrophotometric
12	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
13	pH value	7.31			2.5	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric
14	Phenolic compounds (as C ₆ H ₅ OH), mg/l, Max	<0.001			0.001	0.001	APHA, 22 nd Edition, 4-Amino Autipyrine
15	Selenium (as Se), mg/l, Max	<0.002			0.002	0.01	APHA, 22 nd Edition, AAS-GTA
16	Sulphate (as SO ₄) mg/l, Max	192			2.00	200	APHA, 22 nd Edition. Turbidity
17	Taste	Acceptable			Qualitative	Acceptable	APHA, 22 nd Edition. Taste
18	Total Alkalinity (c _a CO ₃), mg/l, Max	136			4.00	200	IS-3025/23:1986, Titration
19	Total Arsenic (as As), mg/l, Max	<0.002			0.002	0.01	IS 3025/ 37:1988 R : 2003, AAS-VGA
20	Total Chromium (as Cr), mg/l, Max	<0.04			0.06	0.05	IS-3025/52:2003, AAS-Flame
21	Total Dissolved Solids, mg/l, Max	1250			25.00	500	IS 3025 /16:1984 R : 2006, Gravimetric
22	Total Hardness (c _a CO ₃), mg/l, Max	720			4.00	200	IS-3025/21:1983, R-2002, EDTA
23	Turbidity, NTU, Max	4			1.0	1	IS-3025/10:1984 R-1996, Nephelometric
24	Zinc (as Zn), mg/l, Max	0.035			0.01	5.0	IS 3025/ 49 : 1994, R : 2009, AAS-Flame

Analysed By

Dy. Technical Manager
Env. Lab, CMPDI(HQ)
(Authorized Signatory)

WATER QUALITY

(GROUND WATER- ALL PARAMETERS)

Name of the Company: **Bharat Coking Coal Limited**

Year : **2015-16.**

Name of the Cluster: **Cluster - III**

Month: **Q. E. March, 2016.**

Area : **Govindpur Colliery**

**Project:
Govindpur
Colliery**

Cluster III

Stations:

1. Ground Water from Govindpur, Ambagan Village GW-3

Date of Sampling:

28/02/2016

Sl. No	Parameter	Sampling Stations			Detection Limit	IS:10500 Drinking Water Standards	Standard / Test Method
		GW-3	2	3			
1	Boron (as B), mg/l, Max	<0.20			0.20	0.5	APHA, 22 nd Edition ,Carmin
2	Colour,in Hazen Units	2			1	5	APHA, 22 nd Edition ,Pt.-Co. Method
3	Calcium (as Ca), mg/l, Max	51			1.60	75	IS-3025/40:1991, EDTA
4	Chloride (as Cl), mg/l, Max	50			2.00	250	IS-3025/32:1988, R-2007, Argentometric
5	Copper (as Cu), mg/l, Max	<0.03			0.03	0.05	IS 3025/42 : 1992 R : 2009, AAS-Flame
6	Fluoride (as F) mg/l, Max	0.57			0.02	1.0	APHA, 22 nd Edition , SPADNS
7	Free Residual Chlorine, mg/l, Min	0.02			0.02	0.2	APHA, 22 nd Edition, DPD
8	Iron (as Fe), mg/l, Max	<0.06			0.06	0.3	IS 3025 /53 : 2003, R : 2009 , AAS-Flame
9	Lead (as Pb), mg/l, Max	<0.005			0.005	0.01	APHA, 22 nd Edition, AAS-GTA
10	Manganese (as Mn), mg/l, Max	<0.02			0.02	0.1	IS-3025/59:2006, AAS-Flame
11	Nitrate (as NO ₃), mg/l, Max	2			0.5	45	APHA, 22 nd Edition, UV-Spectrophotometric
12	Odour	Agreeable			Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
13	pH value	8.17			0.2	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric
14	Phenolic compounds (as C ₆ H ₅ OH), mg/l, Max	<0.001			0.001	0.001	APHA, 22 nd Edition, 4-Amino Autipyrine
15	Selenium (as Se), mg/l, Max	<0.002			0.002	0.01	APHA, 22 nd Edition, AAS-GTA
16	Sulphate (as SO ₄) mg/l, Max	65			2.00	200	APHA, 22 nd Edition. Turbidity
17	Taste	Acceptable			Qualitative	Acceptable	APHA, 22 nd Edition. Taste
18	Total Alkalinity (c _a CO ₃), mg/l, Max	308			4.00	200	IS-3025/23:1986, Titration
19	Total Arsenic (as As), mg/l, Max	<0.002			0.002	0.01	IS 3025/ 37:1988 R : 2003, AAS-VGA
20	Total Chromium (as Cr), mg/l, Max	<0.04			0.04	0.05	IS-3025/52:2003, AAS-Flame
21	Total Dissolved Solids, mg/l, Max	570			25.00	500	IS 3025 /16:1984 R : 2006, Gravimetric
22	Total Hardness (c _a CO ₃), mg/l, Max	332			4.00	200	IS-3025/21:1983, R-2002, EDTA
23	Turbidity, NTU, Max	3			1.0	1	IS-3025/10:1984 R-1996, Nephelometric
24	Zinc (as Zn), mg/l, Max	0.016			0.01	5.0	IS 3025/ 49 : 1994, R : 2009, AAS-Flame

Analysed By

Dy. Technical Manager
Env. Lab, CMPDI(HQ)
(Authorized Signatory)

CHAPTER - IV

NOISE LEVEL QUALITY MONITORING

4.1 Location of sampling sites and their rationale

I. Block –IV (N6)

To assess the noise level in mine site, the noise levels were recorded in the mine area where all mining activities are in progress.

II. Muraidiah OCP (N5)

To assess the noise generated in the Shatabdi mines activity. Noise levels were recorded in the mines area,

III. Govindpur Village (N7)

To assess the noise level in the industrial area, noise levels were recorded near washery where activities of project during day time in the project area.

IV. Kharkharee (N21)

To assess the noise level in the industrial area, noise levels were recorded during day time in the Mines area.

4.2 Methodology of sampling and analysis

Noise level measurements in form of ' L_{EQ} ' 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).

4.3 Results & Interpretations

Ambient noise levels were recorded during day and night time and the observed values were compared with standards prescribed by MoEFCC.

The results of Noise levels recorded during day and night time on fortnightly basis are presented in tabular form along with the applicable standard permissible limits. The observed values in terms of L_{EQ} are presented.

The observed values at all the monitoring locations are found to be within permissible limits.

NOISE LEVEL DATA

Name of the Company: **Bharat Coking**

Year : **2015-16.**

Coal Limited

Name of the Project: **Cluster -II**

Month: **January, 2016.**

Name of the Stations & Code :

1. **Block –IV(N6)**
2. **Muraidiah OCP (N5)**
3. **Govindpur Village(N7)**
4. **Kharkharee(N21)¹**

(a) First Fortnight


Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Block –IV(N6)	Industrial area	13.01.2016	55.7	75
2	Muraidiah OCP (N5)	Industrial area	11.01.2016	61.6	75
3	Govindpur Village(N7)	Industrial area	14.01.2016	61.4	75
4	Kharkharee(N21)	Industrial area	21.0.2016	63.8	75

(b) Second Fortnight

Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Block –IV(N6)	Industrial area	28.01.2016	58.3	75
2	Muraidiah OCP (N5)	Industrial area	22.01.2016	59.3	75
3	Govindpur Village(N7)	Industrial area	29.01.2016	62.6	75
4	Kharkharee(N21)	Industrial area	27.0.2016	61.2	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, +Night Time: 10.00 PM to 6.00 AM.*

¹ Report released by Shri Indranil De, Manager (Env), CMPDI, RI-1, Asansol, Signed..........Dated 28.05.2016. Job No. 110310

NOISE LEVEL DATA

Name of the Company: **Bharat Coking Coal Limited**

Year : **2015-16.**

Name of the Project: **Cluster -II**

Month: **February, 2016**

Name of the Stations & Code :

1. **Block II OCP (N4)**
2. **Muraidiah OCP (N5)**
3. **Madhuband Washery (N3)**
4. **Madhuband UGP (N33)²**

a. First Fortnight


Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Block –IV(N6)	Industrial area	09.02.2016	60.2	75
2	Muraidiah OCP (N5)	Industrial area	15.02.2016	57.8	75
3	Govindpur Village(N7)	Industrial area	10.02.2016	59.8	75
4	Kharkharee(N21)	Industrial area	08.02.2016	58.7	75

b. Second Fortnight

Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Block –IV(N6)	Industrial area	19.02.2016	59.8	75
2	Muraidiah OCP (N5)	Industrial area	25.02.2016	60.3	75
3	Govindpur Village(N7)	Industrial area	19.02.2016	55.6	75
4	Kharkharee(N21)	Industrial area	26.02.2016	54.9	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, +Night Time: 10.00 PM to 6.00 AM.

² Report released by Shri Indranil De, Manager (Env), CMPDI, RI-1, Asansol, Signed..... Dated 28.05.2016. Job No. 110310

NOISE LEVEL DATA

Name of the Company: **Bharat Coking Coal Limited**

Year : **2015-16.**

Name of the Project: **Cluster -II**

Month: **March, 2016**

Name of the Stations & Code :

1. Block II OCP (N4)
2. Muraidiah OCP (N5)
3. Madhuband Washery (N3)
4. Madhuband UGP (N33)³

a. First Fortnight data


Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Block –IV(N6)	Industrial area	09.03.2016	57.6	75
2	Muraidiah OCP (N5)	Industrial area	12.03.2016	58.2	75
3	Govindpur Village(N7)	Industrial area	15.03.2016	60.7	75
4	Kharkharee(N21)	Industrial area	08.03.2016	61.2	75

b. Second Fortnight data

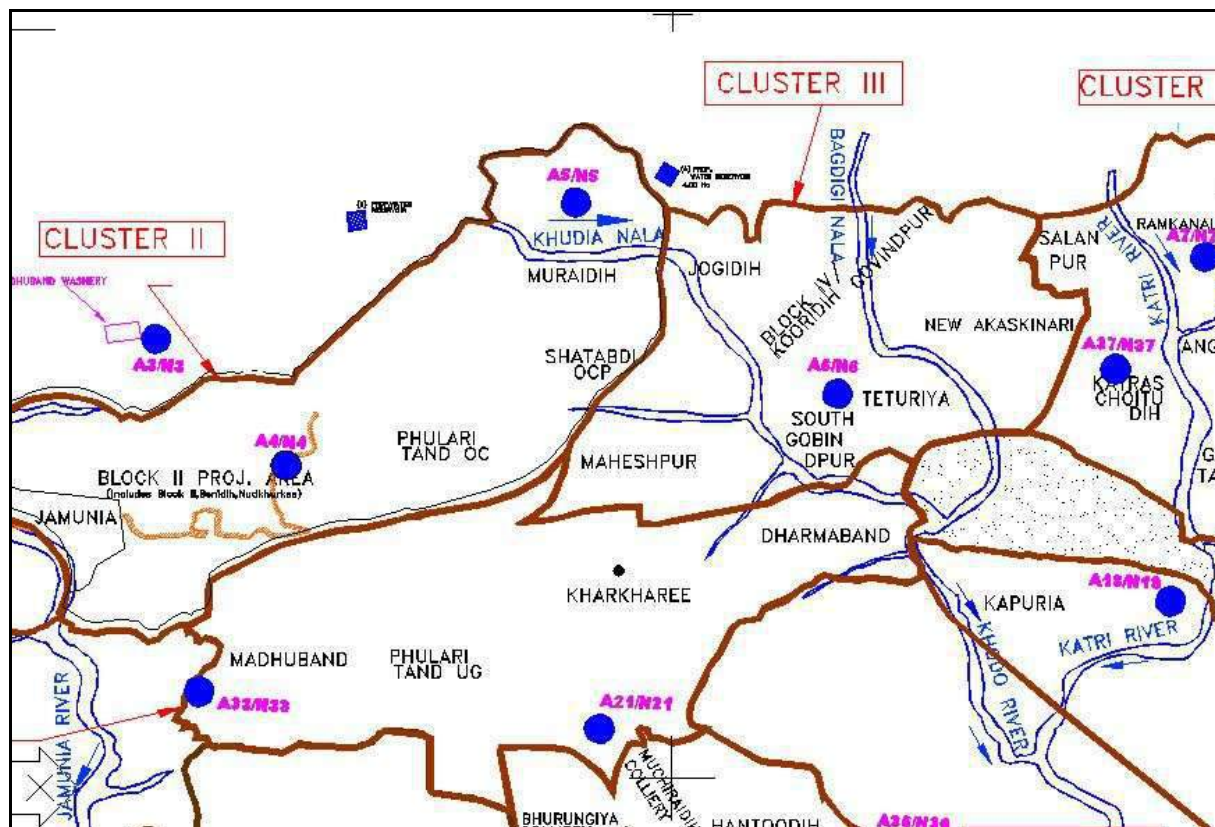
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Block –IV(N6)	Industrial area	30.03.2016	62.3	75
2	Muraidiah OCP (N5)	Industrial area	28.03.2016	57.4	75
3	Govindpur Village(N7)	Industrial area	29.03.2016	62.8	75
4	Kharkharee(N21)	Industrial area	16.03.2016	59.8	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.*

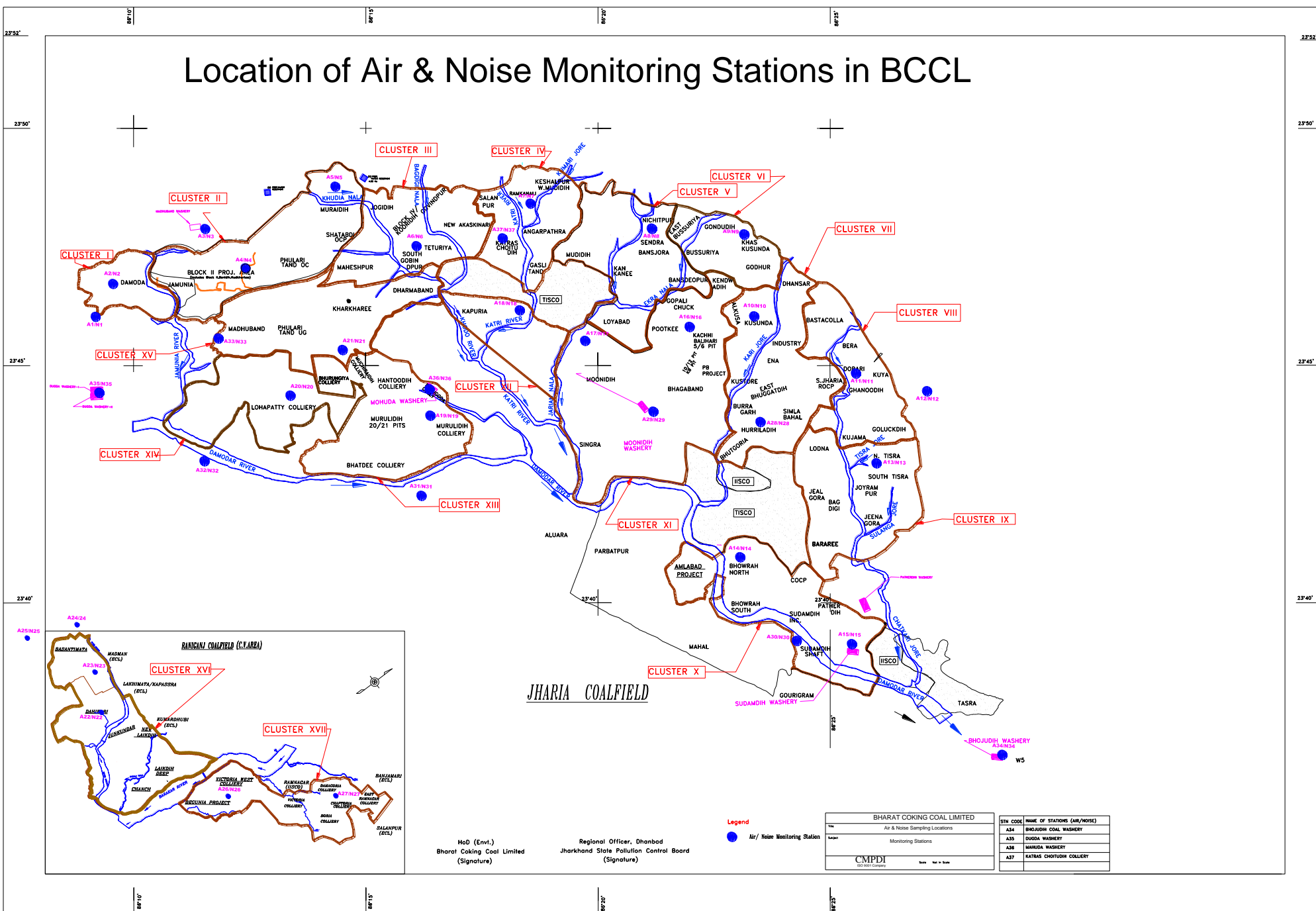
** Day Time: 6.00 AM to 10.00 PM, +Night Time: 10.00 PM to 6.00 AM.*

³ Report released by Shri Indranil De, Manager (Env), CMPDI, RI-1, Asansol, Signed..........Dated 28.05.2016. Job No. 110310

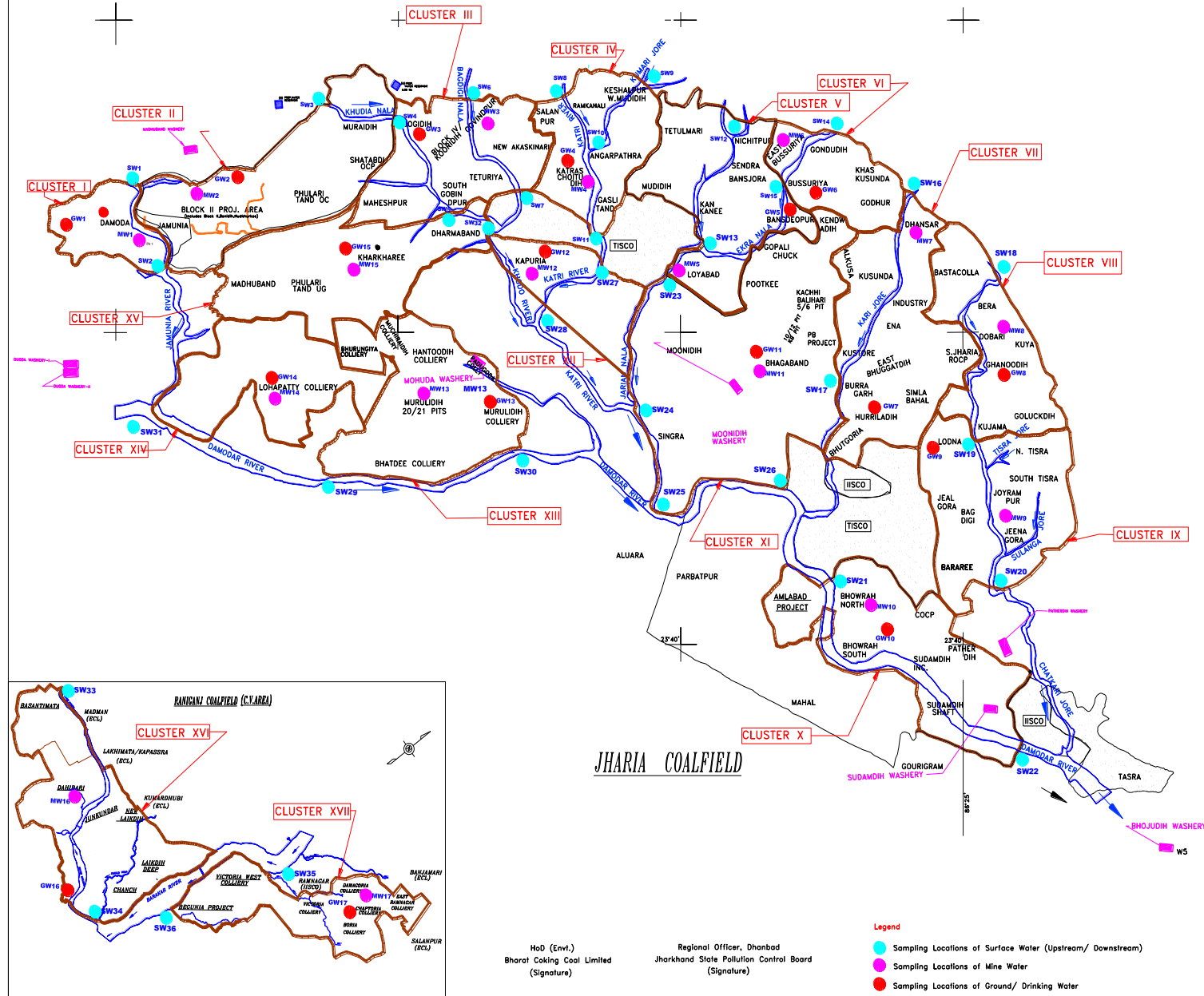
Noise Level Monitoring Location of Cluster III



Location of Air & Noise Monitoring Stations in BCCL



Water Sampling Locations in BCCL



INDEX

Cluster	Surface Water (U/S, D/S)	Name of River/ Nala / Jore	Mine/ Effluent Water	Sampling Location	Ground Water	Sampling Location
I	SW1, SW2	Jamunia River	MW1	Damoda Area Block II OCP	GW1	Shutway Village
II	SW3, SW4	Khudia Nala	MW2		GW2	Joyrampur Village
III	SW4, SW5, SW6, SW7	Khudia Nala, Bagdi Nala	MW3	Govindpur Colliery	GW3	Jogidi Village
IV	SW8, SW11, SW9, SW10	Kari River, Kumari Jore	MW4	Chotudi	GW4	Kankane Village
V	SW12, SW13, SW15	Jarian Nala, Ekra Nala	MW5	Mudidi	GW5	Nichitpur
VI	SW14, SW15	Ekra Nala	MW6	East Bessura UGP	GW6	Bansjora Borewell
VII	SW16, SW17	Kari Jore	MW7	Dhanar UGP	GW7	Huriladi
VIII	SW18, SW19	Kash Jore	MW8	Dobari UGP	GW8	Gharudi
IX	SW19, SW20	Kash Jore	MW9	Jeena UGP	GW9	Lodna
X	SW21, SW22	Damodar River	MW10	North	GW10	Bhowrah South
XI	SW23, SW24, SW25, SW26	Damodar River	MW11	Bhowrah UGP	GW11	Bhagbandh
XII	SW27, SW28	Kari River	MW12	Kapuri	GW12	Kapuri
XIII	SW29, SW30	Damodar River	MW13	Muridih (20/21)	GW13	Muridih
XIV	SW31, SW29	Damodar River	MW14	Lohapatti	GW14	Lohapatti
XV	SW5, SW32	Khudia Nala	MW15	Kharkharee UGP	GW15	Kharkharee
XVI	SW33, SW34	Khudia River	MW16	Dahbari OCP	GW16	Pallabari Village
XVII	SW35, SW36	Damodar River	MW17	Damagoria Colliery	GW17	Chaptoria

Company	BHARAT COKING COAL LIMITED
Title	WATER SAMPLING LOCATIONS
Subject	MONITORING STATIONS
CMPDI	Scale: Not to Scale

to be submitted September - 2014
Next for year 2013

B
C
C
L



BHARAT COKING COAL LIMITED
(A SUBSIDIARY OF COAL INDIA LIMITED)
OFFICE OF THE PROJECT OFFICER
GOVINDPUR COLLIERY

Ref. No. :- GC/013/1798

Date:- 5.12.13

To,
The Member Secretary,
Jharkhand State Pollution Control Board,
T.A. Bhawan, HEC Complex, Dhurwa
Ranchi.

Sub:- Statement for financial year ending Sept. 2013 in form- V, Rule- 14.

Dear Sir,

Enclosed please find herewith form- V (See rule- 14) Environment statement for the financial year ending Sept. 2013 in respect of Govindpur Colliery.

Yours Faithfully,


Project Officer
Govindpur Colliery
Project Office
Govindpur Colliery

C.C.To:- Regional Officer, JSPBC, Bartand, Dhanbad.

- G.M. (Env.) - Koyla Bhawan, Dhanbad.
- Area Manager (Plg.) - Govindpur Area.
- ✓ Safety Officer- Govindpur Colliery.

F O R M V

ENVIRONMENTAL STATEMENT

For the financial year
ending the 31st March, 2013

GOVINDPUR COLLIERY,

GOVINDPUR AREA NO. III

BHARAT COKING COAL LIMITED
(A SUBSIDIARY OF CIL.)

FORM V
(See Rule 14)

Environmental statement for the financial year ending the
the 31st March 2012.

PART-A

1. Name & address of owner/occupier of the industry operation or process. : ASHOK SARKAR
DT. (OP), BCLL
Koyla Bhawan (Dhanbad)
2. Industry category primary (SIC Code) / secondary (SIC Code) : Coal Mining
3. production capacity units : 200 Tc./Day
4. year of establishment : 1973
5. Date of the last environmental statement submitted : 2012.

PART-B

water and Raw material consumption

i) water consumption m³/day

process:

170 KL/Day

Cooling:

10 KL/Day

Domestic

160 KL/Day

Name of products process water consumption per unit of product out put

During the previous financial year

During the current financial year

1.

NIL

NIL

2.

ii) Raw Material consumption

Name of Raw material

Name of products

Consumption of raw material per unit of out put

during the previous fin. year

During the current fin. year

N.A

N.A

N.A

N.A

N.A

N.A

Industry may use codes if disclosing details of raw material would violate contractual obligations. Otherwise all industries have to name the raw material used.

PART-C

Pollution discharged to the Environment/unit of out put:
(parameter as specified in the consent issued)

(1) pollutants	Quantity of pollutants discharged (mass/day)	concentra- tions of pollutants in discha- -rged (mass/day)	percentage of variation from prescribed standard with reasons
----------------	--	---	--

a) water

b) Air

SPM

SO2

NOX

Water analysis report and Air ambient report are attached here with.

PART-D

Hazardous wastes

(as specified under Hazardous wastes/Management and Handling Rules, 1989)

Hazardous waste

Total quantity (Kg.)

During the previous

During the current

financial year

financial year

A) From process

X

X

B) From pollution control facilities

X

X

PART-E

Solid wastes

Total quantity

During the previous
financial year

During the current
financial year

a) From process

N.A

b) from pollution control facility

N.A

c) i) quantity recycled or re-utilised within the unit

N.A

ii) solid

iii) Disposed

PART-F

Please specify the characterizations (in terms of composition and quantity) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

For underground Mines : Nil

For OCP: There is no generation of any hazardous ^{wastes} wastes. There is generation of solid wastes. Solid waste is in the form of rocks. OB is removed to get coal beneath the ground. The OB materials consist of rock, made of sand stone & shale. All OB is simultaneous back filled in existing quarry & old quarry.

PART-G

Impact of the pollution abatement measures taken on conservation of natural resources and on production.

The following abatement measures are under taken and practiced which which the impact on the atmosphere has become positive. Due care is taken to conserve. The natural resources and protect the environment and all its components

PART-H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution.

1. WATER SPRINKLING: All haul roads, siding, transport point coal and heaps.
2. Road maintenance 3. Machine maintenance 4. Exhaust of vehicles control.

PART-I

Any other particulars for improving the quality of the environment

1. Back filling of de-coaled area
2. Dense tree plantation
3. Better mine planning
4. Ambient Air and water monitoring.

AV
Project Officer
Govindpur Colliery
Project Office
Govindpur Colliery

**BHARAT COKING COAL LIMITED**

(A Subsidiary of Coal India Ltd.)
ENVIRONMENTAL LABORATORY
JAGJIVAN NAGAR
DHANBAD

Ref No. Env/Lab/Water/13/ 1126

Date: 11-Oct-2013

To,
The Project Officer
Colliery Govindpur
Area - Govindpur

Sub: Water Analysis Report


Sir,

Enclosed herewith please find the Water Analysis Report of your colliery of the sample collected
on 10-May-13

Location: Mine Water from # 4 Seam Incline
Date Of Collection: 10-May-13

Sl.No.	PARAMETERS	Unit	Results	Limiting Value as per IS-2490
1	Temperature	°C	26.6	40
2	pH		7.5	5.5 - 9.0
3	Specific Conductance @ 25 °C	µmhos/cm	1925	Not Applicable
4	Total Suspended Solids	mg/l	20	Not more than 100
5	Chloride as Cl	mg/l	35.4	Not more than 1000
6	Hardness as CO ₃	mg/l	670	Not Applicable


Chemist


Chief Mgr(Min.) / Sr. Mgr.(Env)

Copy: 1. G.M.(Env.)
2. Area Manager Planning/Nodal Officer(Environment),
3. Laboratory Copy





BHARAT COKING COAL LIMITED

(A Subsidiary of Coal India Ltd.)
ENVIRONMENTAL LABORATORY
JAGJIWAN NAGAR
DHANBAD

Ref No. Env/Lab/Air/13/ 1127

Dated: 11-Oct-13

To,
The Project Officer
Colliery/Project - Govindpur
Area - Govindpur

Sub: Ambient Air Analysis Report


Sir,

Enclosed herewith please find the Ambient Air Analysis Report of your colliery of the sample collected & monitored on : 10-May-13

Location: Near # 2 Seam Incline

DATE	PERIOD	Hrs.	RPM (-10 micron) $\mu\text{g}/\text{m}^3$	SPM (+10 micron) $\mu\text{g}/\text{m}^3$	TSPM $\mu\text{g}/\text{m}^3$	SO ₂ $\mu\text{g}/\text{m}^3$	NOx $\mu\text{g}/\text{m}^3$	Weather	Wind- Direction
10-May-13 to 11-May-13	11.55am- 11.30am	22.5	292.2	310.2	602.4	33	37.1	Clear	East to West
LIMITING VALUE AS PER CPCB	-	-	300	-	700	120	120	-	-


Chemist


Chief Mar(Min)/Sr. Mar(Env)

- Copy:
1. G.M.(Env.)
 2. Area Manager Planning/Nodal Officer (Environment),
 3. Laboratory Copy



BHARAT COKING COAL LIMITED

A Miniratna Company

(A Subsidiary of Coal India Limited A Maharatna Company)

Office of the Manager

MAHESHPUR COLLIERY

Ref No-MHP/DESP/2015/

Dated: - 30/09/2015

TO

The Member Secretary

Jharkhand State Control Board

Dhurwa, Ranchi

Sub:-Submission of Environment Statement for the year 2014-15 and air & effluent water Analysis Report.

Dear Sir,

We are sending herewith the following documents:-

- (1) Environment Statement of year 2014-15.
- (2) Ambient Air Analysis Report.
- (3) Effluent Water Analysis Report.

This is for information and necessary action. Kindly accept the above documents & acknowledge the receipt.

CC To:-

- (1) Regional Office, J.S.P.C.B., Dhanbad
- (2) Area Nodal officer (Environment), Govindpur Area III
- (3) Office File

Yours faithfully


Project Officer

Maheshpur colliery

FORM - V

(See rule 14)

Environmental Statement for the financial year ending the 31st March 2015.

PART - A

(i) Name and address of the owner/occupier of the industry operation or process.

SRI A. SARKAR

Director Technical

Bharat Coking Coal Limited

P.O. - Koyla Nagar, Dhanbad - 826005

(ii) Industry category Primary - (STC Code) Secondary - (SIC Code)

(iii) Production capacity - Units - 39450 Te/yr (April-14 - March-15)

(iv) Year of establishment. Before 1971

(v) Date of the last environmental statement submitted.

PART - B

Water and Raw Material Consumption

1) Water consumption m³ /d

Spraying

75.46 KL/Day

Process

Cooling

Domestic

143.57 KL/Day

Name of Products

Process water consumption per unit of product output

During the previous financial year

During the current financial year

(1)

(2)

1)

1.47 KL Water/Te
of coal

2)

3)

(ii) Raw material consumption

Name of raw materials

Name of products

Consumption of raw material per unit of output.

PART - C

Pollution discharged to Environment/Unit of output

(Parameter as specified in the consent issued)

(1) Pollutants	Quantity of pollutants discharged (mass /day)	Concentrations of pollutants in discharges (mass/Volume)	Percentage of variation from prescribed standards with reasons
----------------	---	--	--

(a) Water

Analysis Report Attached

(b) Air

— DO —

PART - D

Hazardous Wastes

Hazardous Water

Total Quantity (Kg)

During the previous financial year

During the current financial year

(a) From process

—

Accumulator SC PS

(b) From pollution control facilities

Hydraulic oil - 1000 Lts
(SS-46)

PART - E

Solid Wastes

Total Quantity

During the previous financial year

During the current financial year

(a) From process

(b) From pollution control facility

(c) (1) Quantity recycled or re-utilised within the unit

(2) Sold

(3) Disposed

Working is done by
VLA method so there
is no solid waste.

PART - F

Please specify the characterisations (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Hazardous waste is sent to Area Regional Store in a closed container
(In practice, partially hydraulic oil is used for lubrication purpose and rest is sent to Regional Store in closed container)



PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

Due to Partial Reclamation, top Soil and under-ground water is conserved

PART - H

Additional measures/investment proposal for environmental protection including abatement of pollution prevention of pollution.

Water Spraying is done on Road and despatch point at colliery premises

PART - I

Any other particulars for improving the quality of the environment.

Statutory provision of JSPCB is followed by the colliery units

Project Officer
Maheshpur Colliery



BHARAT COKING COAL LIMITED

(A Subsidiary of Coal India Ltd.)
ENVIRONMENTAL LABORATORY
JAGJIWAN NAGAR
DIHANDAD

Ref.No:- Env/Lab/Air/15/

Dated:- 30/09/2015

To,
The Project Officer
Colliery/Project - Maheshpur
Area - Govindpur

Sub:-Ambient Air Analysis Report

Sir,

Enclosed herewith please find the Ambient Air Analysis Report of your colliery of the sample collected & monitored on: - 18 Sep 15.

Location: Near Pit Office

DATE	PERIOD	Hrs.	RPM (-10 micron) $\mu\text{g}/\text{m}^3$	SPM (-10 micron) $\mu\text{g}/\text{m}^3$	TSPM $\mu\text{g}/\text{m}^3$	SO ₂ $\mu\text{g}/\text{m}^3$	NO _x $\mu\text{g}/\text{m}^3$	Weather	Wind- Direction
18-Sep-15 To 19-Sep-15	1.35pm- 1.55pm	24.2	265.2	278.3	548.5	29.8	39.1	Clear	East to west
LIMITING VALUE AS PER CPCB	-	-	300	-	700	120	120	-	-


Chemist

Chief. Manager (Env.)

Copy:

1. G.M. (Env.)
2. Area Manager Planning/Nodal Officer (Environment), Govindpur Area
3. Laboratory Copy



BHARAT COKING COAL LIMITED

(A Subsidiary of Coal India Ltd.)
ENVIRONMENTAL LABORATORY
JAGJIVAN NAGAR
DHANBAD

Ref.No:- Env/Lab/Air/15/

Dated:- 30/09/2015

To,
The Project Officer
Colliery/Project - Maheshpur
Area - Govindpur

Sub:-Water Analysis Report

Sir,

Enclosed herewith please find the Water Analysis Report of your colliery of the sample collected & monitored on:- 18 Sep 15.

Location: Near Pit Office
Date Of Collection: 18-Sep-15

Sl.No.	PARAMETERS	Unit	Results	Limiting Value as per IS-2490
1	Temperature	°C	26.8	32
2	pH		7.1	5.5 9.0
3	Specific Conductance(@25° C	µmhos/cm	1132	Not Applicable
4	Total Suspended Solids	mg/l	14	Not more than 100
5	Chloride as Cl	mg/l	48.3	Not more than 1000
6	Hardness as CO ₃	mg/l	435	Not Applicable


Chemist

Chief Manager (Env.)

Copy:

1. G.M. (Env.)
2. Area Manager Planning/Nodal Officer (Environment), Govindpur Area
3. Laboratory Copy



BHARAT COAKING COAL LIMITED

(A MINI RATNA COMPANY)

A SUBSIDIARY OF COAL INDIA LIMITED – A MAHARATNA COMPANY

OFFICE OF THE PROJECT OFFICER

NEW AKASH KINAREE COLLIERY, POST- KATRASGARH, DIST- DHANBAD, 828113

Ref No. BCCL/NAKC/PO/2015/

Dated:- 15/09/15

To,
The Member Secretary,
Jharkhand State pollution control Board,
T.A. Bhawan, HEC, Complex Dhurwa,
Ranchi 834004

Sub:-Submission of Environmental statement for the Financial year 2014-2015

Dear Sir,

We are sending herewith Environmental statement for the financial year 2014-2015 in respect of New Akash Kinaree colliery.

This is for your kind information.
Thanking you!!

Yours Faithfully


Project Officer
New Akash Kinaree Colliery

Encl:-As above

Copy to:-

1. Regional Officer, Jharkhand State Pollution Control Board, HIG Sarda Nagar, Dhanbad.
2. CGM (ENGR.) BCCL, Koyla Bhawan, Dhanbad.
3. General Manager, Govindpur Area.
4. Area Manager (Plg.), Govindpur Area

"FORM-V"

(Sec rule 14)

Environmental statement for the financial year ending the 31st March 2015**PART-A**

1. Name & address of the owner/ : Director technical P&P (Sri Ashok Sarkar) M/s Bharat
 Occupier of the industry operation Coking Coal limited (B.C.C.L)
 Or process. KoylaBhawan, Koylanagar, Dhanbad
 Pin: - 826005

2. Industry category primary-(STC Code) : Large Scale.
 Secondary- (STC Code).

3. Production capacity. : 546210 Lakh tone/ year.

4. Year of establishment. : Before 1971.

5. Date of last environmental : 10/09/2014.
 Statement submitted.

PART-B**1. Water& Raw Material Consumption.**

Water Consumption	329.44kl/DAY
1. Sprinkling	237.5KL/DAY
2.Process	-
3. Cooling	-
3. Domestic	91.94 KL/day

Name of products:	Process water consumption per unit of product point	
	During the previous financial year	During the previous financial year
Coal	0.18 KL/ton of coal	0.19KL per ton of Coal

2.Raw material consumption.

Name of Raw material	Name of products	Consumption of Raw Materials per unit of Product output	
		During the previous Financial year	During the current Financial year
Nil	Coal	Nil	Nil

Industry may use codes if disclosing details of raw material would violate contractual. Obligation otherwise all industries have to name the material used.

PART-C

Pollution discharged to Environment/unit of out (Parameter as specified in the consent issued).

Pollution	Quality of pollutants Discharged(mass/day)	Concentration of Pollution in discharges (mass/volume)	% of variation from prescribed stack with reason.
a) Water	Temperature Pit TSS Choloridiascl	27.5c 8.2c 15mg/L 30.1mg/L	-
b) Air	SPM RPM NOX T.SPM T.CS	315.5mg/m ³ 299.2mg/m ³ 32.5mg/m 3612.7mg/m 35.1mg/m ³	50% below the limit

PART-D

Hazardous wastes (As specified under Hazardous Wastes/Management & Handling rules, 1989).

Hazardous Wastes	Total Quantity (in Kg.)	
	During the previous financial year	During the previous financial year
a. From process	NOT APPLICABLE	NOT APPLICABLE
b. From pollution control facilities	NOT APPLICABLE	NOT APPLICABLE

PART-E

Solid Wastes

Solid wastes	Total Quantity (in Kg.)	
	During the previous financial year 2013-2014	During the previous financial year 2014-2015
a. From process OCP/UG In case of OC mine	1040736M3/Y	1136457M3/Y
b. From pollution control facilities	Nil	Nil
1. Quantity recycled or reused with the unit.	Nil	Nil
2. Solid	Nil	Nil
3. Disposal	1040736M3/Y	1136457M3/Y

PART-F

Please specify the characterizations (in terms of composite and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

A-For U/G mines/Colliery - Not applicable as neither hazardous wastes nor solid wastes are generated.

B- For Open cast mines- . Not applicable as hazardous wastes.

PART-G

Impact of the pollution abatement measures taken on conservation of natural resource and on the cost of production.

Various pollution abatement measures are practiced, by which the impacts on the environment have come to position. Due care is to conserve the natural resources and protect the environment and all the components.

The following pollution abatement measures are undertaken for underground & opencast mine/Colliery

(i). Water sprinkling- It is done on roads, coal yards as and when required, surface – 1 Km, U/G working faces- 0.5 Km.

(ii). Road maintenance – It is done as and when required

(iii). Tree Plantation 1100 in Ecological restoration and 1050 trees are alive and additional 100 NOS of perusal in the financial year.

(iv). Machine Maintenance – Maintenance of machine/vehicles are done which helps in reduction of vehicles exhaust/ noise pollution as per norms.

(v). Ambient air/ water analysis monitoring – monitoring of water and air quality are done periodically.

(vi). Community awareness – It is done by Hooters and Banners.

(vii). Occupational health/safety measures – It is taken care of as stipulated by DGMS Dust Masks and earplug / muffs are provided at critical zone.

(viii). Improved sanitation and drainage and water treatment - Improved sanitation and drainage is provided in all house. Residents are advised to generate minimum wastes. MADA is supplying drinking water to the residents for domestic purpose.

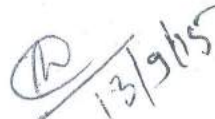
PART-H

Additional measures/investment proposal for environment protection including abatement of pollution, prevention of pollution.

Additional pollution control/abatement measures which are relevant to the unit, similar as listed in PART 'G' plantation of various sites has been proposed.

PART-I

Any other particulars for improving the quality of the environment: -No


Safety Officer
New Akashinaree colliery

 
Manager Project Officer
New Akashinaree colliery New Akashinaree colliery



BHARAT COKING COAL LIMITED

(A Subsidiary of Coal India Ltd.)

Block-IV/ Kooridih Colliery

P.O. – Sonardih, Dist- Dhanbad

Ref:- BCCL/Ar-III/BI-IV/Koor/Agent/ENV.ENMYL REP/2016/1053 Dated: 10.08.2016

29

To
The Regional Engineer/Officer
Jharkhand State Pollution Control Board,
Sadar Patel Nagar, Hirapur Dhanbad

Sub:- Submission of Environment statement along with Air Ambient & Water analysis report (In photocopy) in Form-V of Block-IV/ Kooridih Colliery for the Year-2015

Dear Sir

Enclosed please find herewith the Environment statement for the financial year 2015 of Block-IV/Kooridih colliery under Govindpur Area of M/S BCCL.

Yours faithfully


Project Officer/Manager
Block-IV/Kooridih Colliery

Encl: Photocopy of Water Analysis report and
Air Ambient report, Form-V (Air Ambient &
Water analysis report all in duplicate copies)

Copy to:-

1. G.M. (ENV.) Koyla Bhawan Dhanbad
2. Member Secretary, (JSPCB), Ranchi.

FORM-V

ENVIRONMENT STATEMENT

**FOR THE FINANCIAL YEAR
ENDING THE 31ST MARCH 2015**

**BLOCK-IV/KOORIDIH COLLIERY
GOVINDPUR AREA-III**

**BHARAT COKING COAL LIMITED
(A SUBSIDIARY OF C.I.L.)**

FORM-V

(See rule-14)

Environmental Statement for the financial year ending the 31st March 2015

PART-A

1. Name of the address of the owner :- (BCCL) Nominated owner
Of the industry operation or process. Mr. Ashok Sarkar D.T. (Opn.), Koyla
Bhawan, Koyla Nagar, Dhanbad
Jharkhand.
2. Industry category :- Large Scale.
Primary (STC code)
Secondary (SIC code)
3. Production Capacity (units) :- 563771 tones
4. Year of establishment :- 1971
5. Date of the last environmental Statement Submitted :- 18.09.2012

PART - B

1. Water and River Material Consumption
Water Consumption m3/d: :- 900 KL/day
Process
Cooling :- Sprinkling 500KL/day
Domestic :- 400 KL / day

Name of Products	Process Water Consumption per unit of product output	
	During the previous financial year	During the current financial year
1.	150 KL/day	150 KL/day

2. Raw Material Consumption

Name of Raw Material	Name of Products	Consumption of Raw Material per unit of output	
		During the previous financial year	During the current financial year
		X	X
		X	X
		X	X

Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials uses.

PART - C

Pollution discharged to environment/unit of output (Parameter as specified in the Consent issued)

Pollutants	Quantity of pollution discharged (mass/Day)	Concentration of Pollutants discharged (Mass/Day)	Percentage of variation from prescribed standards with reasons
a) Water			
b) Air	SPM		
	SO ₂		
	NO		

PART - D

Hazardous Wastes

(as specified under Hazardous waste management and Handling Rules, 1989)

Hazardous Wastes	Total quantity (Kg)	
	During the previous financial year	During the Current financial year
a) From process	X	X
b) From pollution control facilities	X	X

PART - E

Solid Wastes

	Total quantity	
	During the previous financial year	During the Current financial year
a) From process		
b) From pollution control facility		
c) 1. Quantity recycled or reutilized within the unit. 2. Sold 3. Disposed	13.12 lac cubic meter OB used for backfilling and 13000 cubic meters OB used for road making.	886062 cubic meter OB used for backfilling and 9000 cubic meters OB used for road making.

PART-F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

For underground mines :- Nil

For OCP :- There is no generation of any hazardous waste.

PART -G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

The abatement measures are undertaken and practiced by which the impact on the atmosphere has become positive. Due care is taken to conserve the natural resources and protect the environment and all its components.

PART-H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution.

1. Water sprinkling :- All haul road, siding, transport route , coal, and OB dumps.
2. Road maintenance
3. Machine maintenance
4. Exhaust of vehicle control.

PART :- I

Any other particulars for improving the quality of the environment.

1. Back filling of de-coaled area.
2. Dense tree plantation.
3. Better mine planning.
4. Ambient Air and Water monitoring.


Project Officer / Manager
Block-IV / Kooridih Colliery



BHARAT COKING COAL LIMITED

A Mini Ratna Company

Koyla Bhawan, Koyla Nagar, Dhanbad - 826005

CIN - U10101JH1972GOI000918

CSR BOOKLET OF GOVINDPUR AREA

2015-16

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2.	Govindpur Area: Introduction	3
3.	CSR committee of Govindpur Area	3
4.	CSR activities at Govindpur Area: An Overview	4
5.	Healthcare: Annual CSR (Healthcare) Expenditure for the year 2015-16 <ul style="list-style-type: none"> • Mobile Medical Van (MMV) • Health Awareness Programmes (2015-16) • Community (CSR) Health Clinics (2015-16) 	4-5
6	Education <ul style="list-style-type: none"> • School grant (2015-16) 	5
7.	Drinking Water & Sanitation	
8.	Highlights of CSR Work under taken during 2015-16 at Cluster-IV	6
9.	Annual CSR (Medical) proposed for the year 2016-17 <ul style="list-style-type: none"> • Mobile Medical Van (MMV) (2016-17) • General Medical Camp Proposed (2016-17) • Community (CSR) Health Clinics (2015-16) 	7
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CSR Policy of CIL: An Overview

The Mines of Coal India and its subsidiaries are located in different parts of the country spread in 8 States, and relatively in isolated areas with little contact to the outside society. 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 production activity in such areas changes the traditional lifestyle of the original inhabitants and indigenous communities and also changes the socio-economic profile of the Area. Hence, the primary beneficiaries of CSR should be land oustees, PAP 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 should be 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: -

- Welfare measures for the community at large, so as to ensure the poorer section of the Society derived the maximum benefits.
- 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.
- Protection and safeguard of environment and maintaining ecological balance.

Govindpur Area: Introduction

The Govindpur Area under the Bharat Coking Coal Limited is committed to good corporate citizenship and makes constant efforts to build and nurture long lasting relationships with members of the society in general and its peripheral communities in Particular.

CSR committee of Govindpur Area

Sr. No.	Name	Designation	Post Hold
1	Sri. B.K Choudhary	Addl. General Manager, Govindpur Area	Chairman
2	Sri. P.R. Sengupta	Chief Manager (P)/APM, Govindpur Area	Member/Nodal Officer
3	Sri. B. M. Kumar	Area Manager (Civil)	Member
4	Sri. A. Karmakar	Area Manager (E & M)	Member
5	Sri. Uma Shankar Singh	CMO I/C/AMO, Govindpur Area	Member
6	Sri. N.K. Pal	Area Manager (Finance), Govindpur Area	Member
7	Sri. Mayank Bhardwaj	Assistant Manager (Mining)/Eco restoration site/environment	Member
8	Sri Jasbeer Singh	Assistant Manager(CD)	Member

+

CSR activities at Govindpur Area: An Overview

- Healthcare
 1. Mobile Medical Van (MMV)
 2. General Medical Camps
 3. Health Awareness Programmes
 4. Community (CSR) Health Clinics
- Education
- Infrastructure Development
- Drinking Water & Sanitation
- Environment and ecology
- Prime Minister's National Relief Fund (Contribution)

Healthcare: Annual CSR (Healthcare) Expenditure for the year 2015-16

I. Mobile Medical Van (MMV):

SN	Month	No. of Mobile Medical Van Camp	Beneficiaries
1	April'15	27	656
2	May'15	27	674
3	June'15	24	653
4	July'15	28	677
5	August'15	24	684
6	September'15	24	653
7	October'15	24	661
8	November'15	22	680
9	December'15	28	650
10.	January'16	23	698
11.	February'16	27	672
12.	March'16	26	683

II. Health Awareness Programmes (2015-16):

SN	Date	Activities	* Amount (in Rs.)
1.	05.06.2015	Blood check up camp	20436.00
2.	05.02.2016	Eye camp	24550.00

III. Community (CSR) Health Clinics(2015-16):

Sr. No.	Month	No. of Beneficiaries
1	April'15	351
2	May'15	351
3	June'15	333

4	July'15	349
5	August'15	360
6	September'15	373
7	October'15	341
8	November'15	342
9	December'15	334
10	January'16	345
11	February'16	358
12	March'16	359

IV. Wellness Clinics (2015-16):

Sr. No.	Month	No. of Beneficiaries
1	April'15	109
2	May'15	109
3	June'15	123
4	July'15	104
5	August'15	86
6	September'15	112
7	October'15	100
8	November'15	92
9	December'15	95
10	January'16	129
11	February'16	133
12	March'16	103

EDUCATION

School Grants (2015-16):

Sr. No.	Name and allocation of Private Committee Managed School	No. of eligible teachers for getting financial assistance	Under Graduate Rs. 5000/- PM/PT	Graduate Rs 5500/- PM/PT	Graduate with BT Rs 6500/- PM/PT	Graduate with B. Ed Rs 7000/- PM/PT	Total amount of financial assistance for 2015-16 (In Rs.)
1	Bahiardih P.S., Jogidih	5	5	0	0	0	300000/-
2	Mohan Kumar Manglam Memorial School, Sonardih	2	1	1	0	0	126000/-
3	ShishuNiketanVidyalya, DomagarhShyamdih	2	2	0	0	0	120000/-
Total							546000/-

Highlights of CSR Work under taken during 2015-16 at Cluster-IV

SN	Details	Rs. in Lakhs	Remarks
1)	Const. of Community Hall near Bhatmurna (Jamuya) of JamuyaPanchyat.	894867.69	File Under Process
2)	Repairing of road from Hospital of Shankar Singh to Mainroad of NichitpurPanchayat.	1818271.71	File Under Process
3)	Const. of PCC road Chhatabad.	1480000.00	File Under Process
4)	Electric Wiring of VidyaMandirSinidih.	425000.00	File Under Process
5)	Reconstruction of Stage, repairing of wall and roof of Community building existing in from of Shiv Kali Mandir premises at Bhatmurna under Govindpur Area.	124271.00	File Under Process
6)	School Grant	4.23 Lakhs	Completed
7)	4 no. Ambulance CSR during 2015-16 (recurring expenditure)	12.191 lakh	431.8 litresDiesel provided by Area annually
8)	Repairing of toilets in various schools in different districts of Jharkhand under "SwachhVidyalayaAbhiyaan" under CSR activities of BCCL.	14 Lakhs	Amount to be provided to Jharkhand govt. for construction (under process). Estimated cost.
9)	Construction of additional 87 units of toilet (girls – 44 & boys - 43) at Latehar&Lohardaga district under CSR activities of BCCL	156.8 Lakhs (approx)	Amount to be provided to Jharkhand govt. for construction (under process). Estimated cost.

Drinking Water & Sanitation

Colliery	Location of Pump	Total Discharge in (in Lakh GPD)	Filtered / Raw	Usage of Water	Remarks
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Maheshpur	9 Seam , Maheshpur	4.5	Raw	Domestic Supply	
	9 Bottom, Maheshpur	4.5	Raw	Domestic Supply	
	Maheshpur Submersible	2.25	Raw	Domestic Supply	
Jogidih	5,6,7 Seam Borehole, Jogidih	4	Raw	Domestic Supply	
	3 Seam, Jogidih	4	Raw	Domestic Supply	
	9 Seam Surface	.9	Raw	Domestic Supply	
	9 Seam Underground, Jogidih	4	Raw	Domestic Supply	
	9 Seam, Jogidih	2	Raw	Domestic Supply	
New Akashkinaree Colliery	Hadhadiya/ Sati Bandh, Akashkinaree	6.3	Raw	Domestic Supply	
	East Katras(Hired) Borehole	.9	Raw	Dust Suppression	
	Bhatmurna Borehole, Akashkinaree	4.5	Raw	Domestic Supply	
	2 Seam, NAKC	3.6	Raw	Domestic Supply	
	1 Seam, NAKC	4.5	Raw	Dust Suppression	
Kharkharee	16 Seam Borehole, Kharkharee	7.2	Filtered	Domestic Supply	

Dharmabandh	Dharmabandh 1 Pit	8	Filtered	Domestic Supply	
		1	Raw	Fire Dealing	
Tetuliya	Tetuliya Office	4	Raw	Domestic Supply	
Amalgamated Block-IV Govindpur Colliery	Sonardih Post Office	3	Raw	Fire Dealing	
		1	Raw	Dust suppression	
	4 Seam Inclined Pump, Govindpur	2.7	Raw	Domestic Supply	
	KM Substation	4	Filtered	Domestic Supply	
	Kooridih	2.6	Raw	Dust Suppression	
	3 Seam Inclined Pump, Block-IV	5	Raw	Domestic Supply	

Summary

Water Usage		Quantity (in lakh GPD)
<i>Fire Dealing</i>		4
<i>Domestic Supply</i>	<i>Raw</i>	52.25
	<i>Filtered</i>	19.2
<i>Dust suppression</i>		9
Total		84.45

Annual CSR (Medical) proposed for the year 2016-17

1) Mobile Medical Van (MMV) (2016-17):

Sr. No.	Month	No. of Mobile Medical Van Camp
1	April'16	20
2	May'16	20
3	June'16	20
4	July'16	20
5	August'16	20
6	September'16	20
7	October'16	20
8	November'16	20
9	December'16	20
10.	January'17	20
11.	February'17	20
12.	March'17	20

General Medical Camp Proposed (2016-17):

SN	Month	No. of General Medical Camp proposed
1	June'16	1
2	November'16	1

Other Medical Activities Proposed (2016-17):

Sr. No.	Activities Proposed
1.	Aids Awareness Programme
2.	NashaMuktiAbhiyan
3.	Blood Pressure Detection Camp
4.	Eye Camp

Community (CSR) Health Clinics(2016-17):

Sr. No.	Month	No. of Beneficiaries (Expected)
1	April'16	5500
2	May'16	
3	June'16	
4	July'16	
5	August'16	
6	September'16	
7	October'16	
8	November'16	
9	December'16	
10	January'17	
11	February'17	
12	March'17	

EDUCATION

Proposed grant for Schools (2016-17)

Sr. No	Name and allocation of Private Committee Managed School	No. of eligible teachers for getting financial assistance	Under Graduate Rs. 5000/- PM/PT	Graduate Rs 5500/- PM/PT	Graduate with BT Rs 6500/- PM/PT	Graduate with B. Ed Rs 7000/- PM/PT	Total amount of financial assistance (Proposed) for 2016-17 (In Rs.)
1	Bahiardi P.S., Jogidih	5	5	0	0	0	300000/-
2	Mohan Kumar Manglam Memorial School, Sonardih	2	1	1	0	0	126000/-
3	ShishuNiketanVidyalya, DomagarhShyamdi	2	2	0	0	0	120000/-

CSR Work to be under taken during 2016-17 at Govindpur Area

Sr. No.	Details	Rs. in Lakhs	Remarks
1	School Grants	5.46Lakhs	To be granted to 3 Schools
2	Hiring of 4 nos. TATA SUMO Ambulance for Mobile Medical Van	-	Hired by BCCL (HQ)