



भारत कोकिंग कोल लिमिटेड  
(एक मिनिस्ट्रल कम्पनी)  
(कोल इण्डिया लिमिटेड का एक अंग)  
महाप्रबन्धक का कार्यालय  
कुसुन्डा क्षेत्र, पो: कुसुन्डा, धनबाद, झारखण्ड

Ref No. BCCL/KA-6/Env./2021/ 14

Date: 31.05.2021

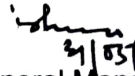
To,  
The Director(s)  
Ministry of Environment, Forest and Climate Change (MoEFCC),  
(Govt. of India)  
Regional Office (ECZ),  
Bungalow No. A-2,  
Shyamali Colony,  
Ranchi - 834002

**Sub: Six monthly compliance report on Environmental Clearance Conditions for the period from October '2020 to March '2021 in respect of Cluster-VII Group of Mines, EC order no.: J-11015/238/2010-1A.II (M) Pt dated 12-10-2018**

Dear Sir,

Enclosed please find herewith six monthly compliance report on environmental clearance conditions for the period from **October'2020 to March'2021** in respect of **Cluster-VII** Group of Mines, **EC order no.: J-11015/238/2010-1A.II (M) Pt dated 12-10-2018** for your kind perusal.

With regards,

  
31/05/21  
General Manager,  
Kusunda Area, BCCL  
(Cluster VII)

## **COMPLIANCE OF EC CONDITIONS of CLUSTER-VII**

**EC order no.: J-11015/238/2010-1A.II (M) Pt dated 12<sup>th</sup> October, 2018**  
**(October'20 to March'21)**

<b>Sl.no.</b>	<b>Specific Conditions by MOEF:</b>	<b>Compliance</b>
<b>4 (i)</b>	The project proponent shall obtain Consent to establish from the State Pollution Control Boards of Jharkhand for the proposed peak capacity of 11.42 MTPA prior to commencement of the increased production.	<b>It is being complied.</b> Consent to Establish has been obtained from JSPCB for the projects where production enhancement is planned/proposed.
<b>4 (ii)</b>	Transportation of coal from face to coal heap shall be carried out by truck. Further, the coal transportation from coal heap to Coal Handling Plant shall be carried out through covered trucks.	<b>It is being complied.</b> Presently coal transportation is being done by trucks covered with tarpaulin cover. Covering of trucks has been made mandatory in the transportation contract. <b>Picture – 1.</b>
<b>4 (iii)</b>	Mitigation measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers.	<b>It is being complied.</b> Mobile Water Sprinklers are being used for Sprinkling water on transportation roads. Additionally Manual Sweeping is done on Public roads on routine basis. <b>Picture – 2 &amp; Picture - 3.</b>
<b>4 (iv)</b>	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.	<b>It is being complied.</b> Sufficient coal pillars have been left around air shafts as per Coal Mines Regulations 2017 and DGMS Orders.
<b>4 (v)</b>	Solid barrier shall be left below the roads falling within the block to avoid any damage to the roads and no depillaring operation shall be carried out below the township/colony.	<b>It is being followed.</b> Sufficient barriers are left for saving the surface installation and infra structures as per Coal Mines regulation 2017 and DGMS Orders.
<b>4 (vi)</b>	Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.	<b>It is being complied.</b> Time to time depression created by the mining operations have been filled by the locally available material and over burden.
<b>4 (vii)</b>	Sufficient number of pumps of adequate capacity shall be deployed to pump out mine water during peak rain fall.	<b>It is being complied.</b>
<b>4 (viii)</b>	The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 11.42 MTPA.	Application for obtaining NOC for usage/extraction of Ground water is already under process to CGWA for Cluster VII group of Mines. Copy of Application enclosed as <b>Picture - 4</b>
<b>4 (ix)</b>	Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.	<b>It is being Complied.</b> Proper safety, health hazards and the corrective measures are being taken by Area and HQ Level Safety/Medical Board on regular basis. Periodical Medical Examination Report enclosed as <b>Annexure - VI</b>
<b>4 (x)</b>	The fire dealing operations by excavating out fire should be expedited.	<b>It is being complied.</b> Mining is being carried out by OC Method where UG fire is present with due permission from DGMS. Action is being taken to control, mine fires including old OB dump & areas as specified in Jharia Master Plan.

<b>Generic Conditions by MOEF:</b>		
<b>A. Mining</b>		
<b>i</b>	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.	<b>It is being complied.</b> All stipulated provisions and subordinate legislations are being followed.
<b>ii</b>	No change in mining method, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forest and Climate Change.	<b>Agreed.</b>
<b>iii</b>	Mining shall be carried out as per the approved mining plan including Mine Closure Plan, abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).	<b>It is being complied.</b> Mining is being carried out abiding by mining laws and relevant circulars issued by DGMS. Mine Closure Plan, has been prepared for each Mine in this cluster. Progressive mine closure has been implemented regularly as per the approved Mine Closure Plan prepared by CMPDIL.
<b>iv</b>	No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.	<b>Agreed.</b>
<b>B. Land reclamation and water conservation</b>		
<b>i</b>	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 4:50000 scale shall be submitted to Ministry of Environment, Forest and Climate Change/Regional Office (RO).	<b>It is being complied.</b> Land Use Map of Cluster VII has been prepared by CMPDIL using remote sensing data for monitoring of land use pattern and for post mining land use. The land use map is attached in <b>Annexure I</b> .
<b>ii</b>	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/Gol Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS.	<b>It is being complied.</b> The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EMP report. Approval from competent authority of State Govt. shall be sought in case of diversion of Natural Water Course. Embankment has been constructed in some areas and further embankment and stone pitching work will be carried out.
<b>iii</b>	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of	<b>It is being complied.</b> <ul style="list-style-type: none"> <li>Backfilling process in abandoned pits and voids are continuously carried out along with the mining operation.</li> </ul>

	<p>aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective state government as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27<sup>th</sup> August, 2009 and subsequent amendments.</p>	<ul style="list-style-type: none"> <li>Ecological restoration and Plantation shall be carried out on finalization of dumps.</li> <li>Abandoned Pits will be utilized for Pisciculture in Post Mining Phase.</li> </ul>
<b>iv</b>	<p>The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the Ministry of Environment, Forest and Climate Change/Regional Office on six monthly basis.</p>	<p><b>It shall be complied.</b></p>
<b>V</b>	<p>The top soil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized for long. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilized with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office on six monthly basis.</p>	<p><b>It is being complied.</b> Top soil dumps have been created separately. Top soil is spread over Slopes of OB Dumps, used in plantation activities. Top soil is spread over slopes of OB dumps and grass seed balls are thrown over it for grassing. Once the OB dump reaches its final stage it would be taken up for Three tier plantation and eco-restoration. Native flora species would be planted in these sites during eco - restoration <b>Picture – 6, 8 &amp; 11.</b></p>
<b>C. Emissions, effluents, and waste disposal</b>		
<b>i</b>	<p>Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM10/PM2.5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.</p>	<p><b>It is being complied.</b> Presently coal transportation is being done by trucks covered with tarpaulin cover. Covering of truck has been made mandatory in the transportation contracts. Mobile Water Sprinklers are being used for mitigating dust from being air borne from haul roads. Manual sweeping of Public roads used for transportation is being done on routine basis. <b>Picture – 1 &amp; 2</b></p>



<b>ii</b>	Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area in a phased manner. The green belt comprising a mix of native species shall be developed all along the major approach/ coal transportation roads.	<b>It shall be complied.</b> 3-tier plantation shall be developed along mine lease area in available spaces in a phased manner. Green belt along final transportation roads shall be developed.
<b>iii</b>	The transportation of coal shall be carried out as per the provisions and route proposed in the approved Mining Plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.	<b>It is being complied.</b>
<b>iv</b>	Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centers.	<b>It is being complied.</b> Vehicles used for transportation of coal are covered by tarpaulin cover and are monitored for the vehicular emission by the transporter and BCCL. Copy of some Pollution Under Control Certificates has been enclosed as <b>Annexure II</b> .
<b>v</b>	Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.	<b>It is being complied.</b> Crushers/feeders breakers are fitted with water sprinklers Coal handling plant are enclosed with metal sheets and are fitted with water sprinklers to check fugitive emissions. <b>Picture - 7</b>
<b>vi</b>	Coal handling plant shall be operated with effective control measures viz. bag filters/water or mist sprinkling system etc. to check fugitive emissions from crushing operations, conveyor system, transfer points, etc.	<b>It is being complied.</b> Coal handling plant are enclosed with metal sheets and are fitted with water sprinklers to check fugitive emissions. <b>Picture - 7</b>
<b>vii</b>	Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.	<b>It is being complied.</b> Mine water is being used for the industrial as well as domestic purpose. Mine water is also supplied to colonies and community after filtration through pressure filters, slow sand filters and rapid sand filters. Proposal for mine water supply to nearby village/community is taken up under CSR Policy of the company. Rain Water Harvesting is being implemented in phased manner. A MoU has been signed between Coal India Ltd. & Govt. of Jharkhand for providing mine water to nearby villages. A copy of MoU has been enclosed as <b>Annexure III</b> .

<b>viii</b>	Catch/garland drains and siltation ponds of appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de- silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilized for dust suppression measures and green belt development. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.	<b>It is being complied.</b> In phased manner, garland drains are constructed around mine working, coal heaps & OB dumps to prevent run off water and flow of sediments directly into the river & water bodies.
<b>ix</b>	Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap shall be installed and maintained fully functional with effluents discharge adhering to the norms. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste.	<b>It is being complied.</b> Effluents discharge standards are regularly monitored by CMPDIL for cluster VII group of mines. Mine water is being treated using filter plants (Pressure, Sand filters etc.) for its further use in industrial purpose and supply to the residential areas. Mine water monitoring report has been enclosed as <b>Annexure IV</b> . Oil & grease Trap has been installed. <b>Picture 10</b>
<b>x</b>	Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	<b>It is being complied.</b> Rain Water Harvesting is being constructed minewise. Mine water is also supplied to colonies and community after filtration through pressure filters, slow sand filters and rapid sand filters.
<b>D. Illumination, Noise &amp; Vibration</b>		
<b>i</b>	Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.	<b>It is being complied.</b> Adequate illumination is being ensured in all mine locations as per DGMS standards and the same is being monitored by Area & HQ Level Safety Committees on regular basis.

<b>ii</b>	Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.	<b>It is being complied.</b> Personnel operating HEMMs, drilling machine and other machines comply with safety regulation and are equipped. Noise monitoring data has been enclosed as <b>Annexure V.</b>
<b>iii</b>	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations and fly rocks as per the guidelines prescribed by the DGMS.	<b>It is being complied.</b> DGMS regulations are followed strictly for blasting. Additionally Personnel operating HEMMs, drilling machine and other machines are given training on regular basis.
<b>iv</b>	The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.	<b>It is being complied.</b> Noise level monitoring is done by CMPDIL on monthly basis. Noise monitoring data has been enclosed as <b>Annexure V.</b>

## **E. Occupational health & safety**

<b>i</b>	The project proponent shall undertake occupational health survey for initial and periodical medical examination of the workers engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.	<b>It is being complied.</b> Initial and Periodical Medical Examination (PME) of all the mining and other personnel is being carried out regularly at Area Hospital, as per the Statutes and guidelines of Director General of Mines Safety (DGMS). Enclosed as <b>Annexure VI.</b>
<b>ii</b>	Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.	<b>It is being complied.</b> Protective respiratory devices & other PPEs are supplied to personnel working in dusty areas. Also, a separate full-fledged Human Resource Development (HRD) Department is conducting regular training programme on these issues. Apart from this Vocational Training Centers (VTCs) are existing in all the Areas of BCCL, which provides periodical training on the safety and occupational health issue to the workers.
<b>iii</b>	Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.	<b>It is being complied.</b> HRD Department & Area level Vocational Training Centers are conducting regular training programs. Status of training enclosed as <b>Annexure VII. Picture - 5</b>

<b>F. Ecosystem and biodiversity conservation</b>		
<b>i</b>	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.	<b>It is being complied.</b> Conservation and Protection of endangered flora/fauna shall be taken with utmost priority if spotted/reported. Action Plan shall be prepared in consultation with State Forest and Wildlife Department.
<b>G. Public hearing, R&amp;R and CSR</b>		
<b>i</b>	Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land ousters shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.	<b>It is being complied.</b> The issues raised during Public Hearing is mentioned in the EMP and phase wise measures are being taken to ensure its implementation.
<b>ii</b>	The project proponent shall ensure the expenditure towards socio-economic development in and around the mine, in every financial year as per the Corporate Social Responsibility Policy as per the provisions under Section 135 of the Companies Act, 2013	<p><b>It is being complied.</b> BCCL is implementing CSR activities at various scale. A separate CSR committee has been formed at area level, which is looking after the works being executed under CSR.</p> <p>Various activities under CSR were undertaken during COVID-19 viz. distribution of masks, hand sanitisers, gloves, soap, food packets, etc details of which is listed in <b>Annexure VIII.</b></p>
<b>iii</b>	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29" October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.	<b>It shall be complied.</b> Rehabilitation of project affected families is being done as per Approved Master Plan for Jharia Coalfields.
<b>iv</b>	The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.	It shall be complied.

## H. Corporate Environment Responsibility

<b>i</b>	The Company shall have a well laid down environment policy duly approved by Board of Directors. The environment policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions. Also, the company shall have a defined system of reporting of non-compliances/violations of environmental norms to the Board of Directors and/or shareholders/stakeholders.	A well-defined Corporate Environment Policy has already been laid down and approved by the Board of Directors. This is also uploaded on company's website. Enclosed as <b>Annexure IX</b> .
<b>ii</b>	The project proponent shall comply with the provisions contained in this Ministry's OM dated 1 <sup>st</sup> May, 2018, as applicable, regarding Corporate Environment Responsibility	<b>It shall be complied.</b>
<b>iii</b>	The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions should be displayed on website of the Company.	<b>It is being complied.</b> A hierarchical system of the company to deal with environmental issues from corporate level to mine level already exists.
<b>iv</b>	A separate environmental management cell both at the project and company headquarter level, with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	<b>Complied.</b> <ul style="list-style-type: none"> <li>A full-fledged Environment Department, headed by a Dy.GM (Environment) along with a suitable qualified multi-disciplinary team of executives have been established at Company Headquarters for implementation of Environment Policy of the company.</li> <li>One Executive in each area has also been nominated as Nodal Officer (Environment) for looking after routine environment related jobs along with an Environment Management Cell at Area Level.</li> <li>For implementing and look after Socio-Economic Issues, an executive of Community Development Cadre is also posted at area level.</li> </ul>
<b>v</b>	Action plan for implementing EMP and environmental conditions shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	<b>It is being complied.</b>
<b>vi</b>	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Internal audit is done periodically and third party audit shall be done by ICFRE after COVID-19 pandemic.

<b>I. Statutory Obligations</b>		
<b>i</b>	The environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Law from time to time, and as applicable to the project.	Agreed
<b>ii</b>	This environmental clearance shall be subject to obtaining wildlife clearance, if applicable, from the Standing Committee of National Board for Wildlife.	Agreed
<b>iii</b>	The project proponent shall obtain Consent to Establish/Operate under the Air Act, 1981 and the Water Act, 1974 from the concerned State Pollution Control Board.	Agreed.
<b>iv</b>	The project proponent shall obtain the necessary permission from the Central Ground Water Authority. (CGWA).	Agreed. Application for obtaining NOC for usage/extraction of Ground water is already submitted to CGWA for Cluster VII group of Mines. <b>Picture 4</b>
<b>J. Monitoring of project</b>		
<b>i</b>	Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>x</sub> and NO <sub>x</sub> . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.	<p><b>It is being complied.</b> Regular Monitoring is being carried out by CMPDIL.</p> <p>Tender for COAAQMS was already floated, technical and financial scrutiny is going on the bids submitted.</p> <p>Establishment of ambient environment quality monitoring stations has been finalized with the consultation of Jharkhand State Pollution Control Board. Enclosed in <b>Annexure X</b>.</p>
<b>ii</b>	The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.	<b>It is being complied.</b> Data is regularly submitted to ministry along with compliance report. Ambient Air Quality monitoring report attached as <b>Annexure XI</b> .
<b>iii</b>	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.	<b>It is being complied.</b> Effluents discharge standards are regularly monitored by CMPDIL for cluster VII group of mines. Mine water is being treated using filter plants (Pressure, Sand filters etc.) for its further use in industrial purpose and supply to the residential colonies. Mine water monitoring report has been enclosed as <b>Annexure IV</b> .

<b>iv</b>	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	<b>It is being Complied.</b>
<b>v</b>	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to Ministry of Environment, Forest and Climate Change/Regional Office.	<b>Compliance under progress.</b> <ul style="list-style-type: none"> <li>For Construction of Piezometers, tender has been cancelled thrice. Re tendering is under process. <b>Picture-12.</b></li> </ul> CMPDI is regularly conducting study of groundwater level and quality of areas within Cluster VII. Groundwater monitoring data has been enclosed as <b>Annexure XII.</b>
<b>vi</b>	Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.	<b>It is being complied.</b> CMPDI RI-II is regularly conducting study water quality. Water Quality report attached as <b>Annexure IV.</b>
<b>vii</b>	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental conditions to the Ministry of Environment, Forest and Climate Change/Regional Office. For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years.	It is being complied.
<b>viii</b>	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Agreed.
<b>K. Miscellaneous</b>		
<b>i</b>	Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.	<b>It is being complied.</b> Conventional bulbs are being replaced by LED bulbs in official/industrial premises. Energy efficient High Mast Lighting towers, energy efficient fans are being procured replacing the old ones. Solar Energy is also being harnessed at HQ level.
<b>ii</b>	The project authorities shall inform to the Regional Office regarding commencement of mining operations.	<b>Agreed.</b>

<b>iii</b>	A copy of the environmental clearance shall be marked to concerned Panchayat. A copy of the same shall also be sent to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for information in public domain within 30 days.	<b>It has been complied.</b>
<b>iv</b>	The EC shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain.	<b>It has been complied.</b>
<b>v</b>	The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of this clearance, informing that the project has been accorded environmental clearance and a copy of the same is available with the State Pollution Control Board and also at website of the Ministry.	<b>It has been complied.</b> Enclosed in <b>Annexure XIII.</b>
<b>vi</b>	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&CC by e-mail. Concerns raised during public hearing.	<b>It is being complied.</b> EC Compliance is regularly updated on company's website.
<b>vii</b>	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.	<b>Agreed</b>



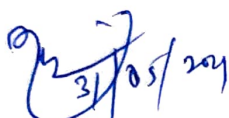
# **COMPLIANCE OF ADDITIONAL EC CONDITIONS of CLUSTER-VII**

**EC order no.: J-11015/238/2010-1A.II (M) Pt dated 20<sup>th</sup> August, 2020**

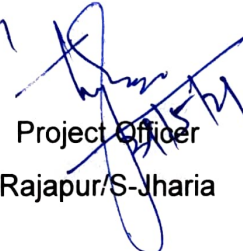
<b>Sl.no.</b>	<b>Conditions by MOEF:</b>	<b>Compliance</b>
<b>(i)</b>	Mitigating measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression, arrangement at loading and unloading points, etc.	<b>It is being complied.</b> Mobile Water Sprinklers are being used for Sprinkling water on transportation roads. <b>Picture - 2</b>  Additionally Manual Sweeping is done on Public roads on routine basis. <b>Picture - 3</b>  Green belt is being development along railway sidings. <b>Picture - 7</b>
<b>(ii)</b>	Continuous monitoring of occupational safety and other health hazards, and the corrective actions needs to be ensured.	<b>It is being Complied.</b> Proper safety, health hazards and the corrective measures are being taken by Area and HQ Level Safety/Medical Board on regular basis
<b>(ii)</b>	Persons of nearby villages shall be given training on livelihood and skill development to make them employable.	<b>It is being complied.</b> Company is organizing training on regular basis through Vocational Training Centre and Human Resource Department. Also skill development for PAPs is being undertaken. <b>Picture 13</b>
<b>(iv)</b>	Thick green belt of adequate width at the final boundary in the downwind direction of the project site shall be developed to mitigate/check dust pollution.	<b>It shall be complied.</b>
<b>(v)</b>	Efforts shall be made for utilizing alternate sources of surface water, abandoned mines or else whatsoever and thus minimizing dependability on a single source.	<b>It is being complied.</b> Mine water is being used for the industrial as well as domestic purpose. Mine water is also supplied to colonies and community after filtration through pressure filters, slow sand filters and rapid sand filters. Rain Water Harvesting is being implemented in phased manner.
<b>(vi)</b>	Continuous monitoring of occupational safety and other health hazards, and the corrective actions needs to be ensured.	<b>It is being Complied.</b> Proper safety, health hazards and the corrective measures are being taken by Area and HQ Level Safety/Medical Board on regular basis
<b>(vii)</b>	A third party assessment of EC compliance shall be undertaken once in three years through reputed Government Institutes or any other expert agency identified by the Ministry.	<b>It shall be Complied.</b> Third party audit shall be done by ICFRE after COVID-19 pandemic.
<b>(viii)</b>	Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air borne of particles.	<b>It is being complied.</b> Grass seed balls are spread over slopes of active OB Dumps. <b>Picture – 6 (OB Dump Pic)</b>
<b>(ix)</b>	Project Proponent shall obtain blasting permission from DGMS for conducting mining operation near villages and explore deployment of rock breakers of suitable capacity in the project to avoid blasting very near to villages. There shall be no damages caused to habitations/structures due to blasting activity.	<b>It is being complied.</b>
<b>(x)</b>	The Project proponent shall comply with all the statutory requirements and judgement of Hon'ble Supreme Court dated 2 <sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of	<b>Agreed.</b>

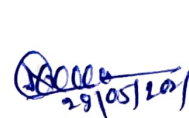
	Common Cause versus Union of India and Ors. State Government shall ensure that the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department in strict compliance of judgement of Hon'ble Supreme Court dated the 2 <sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.	
(xi)	Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measures for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.	<b>It is being complied.</b> Initial and Periodical Medical Examination (PME) of all the mining and other personnel is being carried out regularly at Area Hospital, as per the Statutes and guidelines of Director General of Mines Safety (DGMS). Report attached as <b>Annexure VI.</b>
(xii)	Project proponent shall follow the mitigation measures provided in Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29 <sup>th</sup> October, 2014, titled " Impact of mining activities on Habitations- Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or habitations and the village are surrounded by the mine lease area."	<b>Agreed.</b>
(xiii)	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.	<b>It is being followed.</b>
(xiv)	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.	<b>It shall be complied if any endangered fauna spotted.</b>
(xv)	Hon'ble Supreme Court in a Writ Petition(s) Civil No. 114/2014, Common Cause v Union of India &	<b>It shall be complied.</b>

Ors vide its judgment dated 8<sup>th</sup> January, 2020 has directed the Union of India to impose a condition in the mining lease and similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna, etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to Regional Office of the MoEFCC.


  
Project Officer  
Ena OC

  
Project Officer  
ADIC


  
Project Officer  
Rajapur/S-Jharia


  
Project Officer  
Kusunda OC

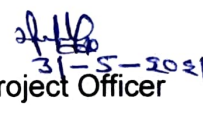
  
Project Officer  
AEBS

  
Project Officer  
Bhutgoria UG

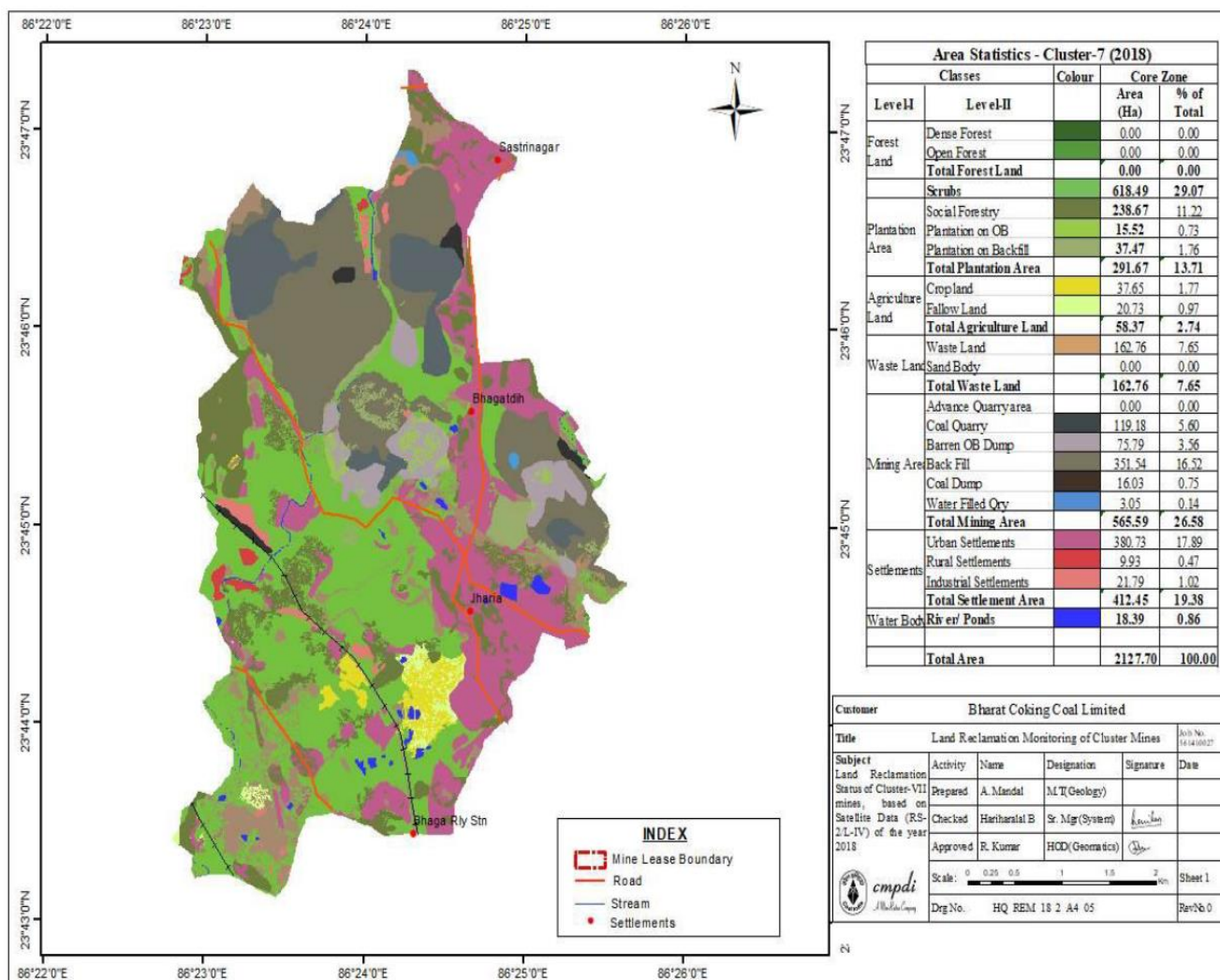
  
Project Officer  
Alkusa UG

  
Project Officer  
Burragarh UG

  
Project Officer  
Hurriladih UG

  
Project Officer  
Kustore UG

## LAND USE / LAND COVER MAP OF THE CLUSTER-VII MINES, BCCL



Sl no	Land Use Details	Existing (sq. meter)	Proposed (sq. meter)	Grand Total (sq. meter)
1	Green Belt Area	968.53 x 10 <sup>4</sup>	968.53 x 10 <sup>4</sup>	968.53 x 10 <sup>4</sup>
2	Open Land	746.72 x 10 <sup>4</sup>	746.72 x 10 <sup>4</sup>	746.72 x 10 <sup>4</sup>
3	Road/ Paved Area	380.73 x 10 <sup>4</sup>	380.73 x 10 <sup>4</sup>	380.73 x 10 <sup>4</sup>
4	Rooftop area of building/ sheds	31.71 x 10 <sup>4</sup>	31.71 x 10 <sup>4</sup>	31.71 x 10 <sup>4</sup>
5	Total	2127.70 x 10 <sup>4</sup>	2127.70 x 10 <sup>4</sup>	2127.70 x 10 <sup>4</sup>

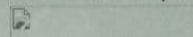


## POLLUTION UNDER CONTROL CERTIFICATE

Authorised By:  
Transport Department, Government of Jharkhand



TEST RESULT : PASS  
VALID TILL: 24/Sep/2021



DIESEL DRIVEN VEHICLES

Certified that the vehicle conforms to the standards  
prescribed under rule 115(2) of CMV Rules 1989



Certificate S. No. JH01000670000127  
Registration No. JH10AR6902  
Owner Name SURESH RAM  
Chassis No. MAT448062E3J\*\*\*\*\*  
Engine No. B591803241J633\*\*\*\*\*  
Class of Vehicle Goods Carrier  
Make TATA MOTORS LTD  
Model LPK2518  
Vehicle Category HEAVY GOODS VEHICLE  
Date of Registration 13/Oct/2014  
Emission Norms BHARAT STAGE III  
Fuel DIESEL  
Date of Testing 25/Mar/2021  
PUC Equipment IBSYS  
Manufacturer Name  
PUC Equipment  
Manufacturer Model ECM1601  
Name  
PUC Equipment Serial C0451  
No.

FUEL	Light Absorption Coefficient (Permissible Limit)	Measured Value
DIESEL	2.45	0.16267

Time of Testing 10:49:33  
Fee Charged Rs.300.0  
Fee Charged

(three hundred rupees  
only)

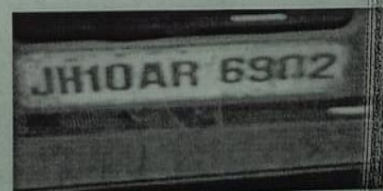
In case of any complain Please write to Transport  
Commissioner, Jharkhand

Auto Emission Testing Centre Code:  
JH0100067

Testing Centre Name: HILL VIEW  
FILLING STATION

Centre Address: GODHAR,  
KUSUNDA, DHANBAD, 828116

Test Conducted By: SANTOSH KUMAR  
GUPTA



## TEST RESULT FOR DIESEL VEHICLE

	IDLE RPM	MAX RPM	K_VALUE	OIL TEMP
TEST 1	642.0	2782.0	0.252	27.0
TEST 2	682.0	2833.0	0.118	27.0
TEST 3	691.0	2797.0	0.118	27.0
AVG	671.66667	2804.0	0.16267	27.0

This is a computer generated certificate and does not require signature

For more information, please visit PTO and correct norms.

# POLLUTION UNDER CONTROL CERTIFICATE

Authorised By:  
Transport Department, Government of Jharkhand



TEST RESULT : PASS  
VALID TILL: 12/Sep/2021

Certificate No.: JH01000670000030  
Registration No: JH10BL7375  
Owner Name: DHANESHWAR  
MONDAL  
Chassis No.: MAT448236JAA01532  
Engine No.: B1A84445122  
Class of Vehicle: Goods Carrier  
Make: TATA MOTORS LTD  
Model: 50649638000R  
Vehicle Category: HEAVY GOODS  
VEHICLE  
Date of Registration: 05/Mar/2018  
Emission Norms: BHARAT STAGE IV  
Fuel: DIESEL  
Date of Testing: 13/Sep/2020  
PUC Equipment: I3SYS  
Manufacturer Name:  
PUC Equipment: ECM1601  
Manufacturer Model:  
Name:  
PUC Equipment Serial: C0451  
No.:



DIESEL DRIVEN VEHICLES  
Certified that the vehicle conforms to the standards  
prescribed under rule 115(2) of CMV Rules 1989

FUEL	Light Absorption Coefficient (Permissible Limit)	Measured Value
DIESEL	1.62	0.21067

Time of Testing: 15:07:28  
Fee Charged: Rs.300.0  
Fee Charged:

(three hundred rupees  
only)

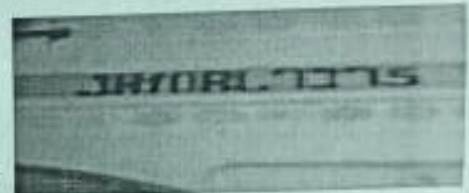
In case of any complain Please write to Transport  
Commissioner Jharkhand

Auto Emission Testing Centre Code:  
JH0100067

Testing Centre Name: HILL VIEW  
FILLING STATION

Centre Address: GODHAR,  
KUSUNDA, DHANBAD, 828116

Test Conducted By: SANTOSH KUMAR  
GUPTA



## TEST RESULT FOR DIESEL VEHICLE

	IDLE RPM	MAX RPM	K VALUE	OIL TEMP
TEST 1	728.0	1750.0	0.259	27.0
TEST 2	929.0	1747.0	0.259	27.0
TEST 3	892.0	1761.0	0.114	27.0
AVG	849.66667	1759.33334	0.21067	27.0

This is a computer generated certificate and does not require signature

## **Memorandum of Understanding**

**for**

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

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

### **By and Between**

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

### **And**

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

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



**Whereas:**

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



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

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

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

Provided further that in case dewatering is required to start coal production in national interest from these mines then the parties will sit together and mutually decide modalities for the same.

- xi. The sustainability of mine sites in respect of future availability of water will be assessed/ studied by CIL.
- xii. This MoU shall be in accordance with applicable Acts, Rules and Guidelines for coal mining including mine closure guidelines and shall not be in contravention with provisions made therein.

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

For Coal India Limited

For Government of Jharkhand

Department of Industries, Mines &  
Geology

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

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

(.....)

(.....)

Drinking Water & Sanitation  
Department

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

(.....)

Witness 1 (Soumitra Singh)

Witness 1

30/10/14  
(Ajay Nath Singh)

Witness 2

Witness 2



## WATER QUALITY MONITORING

### 3.1 Location of sampling sites

(Refer Plate No. – II)

#### i) Mine Discharge of Dhansar UGP (MW7)

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

### 3.2 Methodology of sampling and analysis

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

### 3.3 Results & Interpretations

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

## WATER QUALITY DATA (EFFLUENT WATER- FOUR PARAMETERS)

Name of the Cluster: Cluster -VII		Month: MAR. 2021	Name of the Station: Mine Discharge of Dhansar UGP	
Sl. No.	Parameters	MW7 First Fortnight 15.03.2021	MW7 Second Fortnight 22.03.2021	As per MOEF General Standards for schedule VI
1	Total Suspended Solids	44	38	100 (Max)
2	pH	7.61	7.39	5.5 - 9.0
3	Oil & Grease	<2.0	<2.0	10 (Max)
4	COD	20	24	250 (Max)

All values are expressed in mg/lit except pH.

सुमान रंजन राय

Analysed By  
JSA/SA/SSA

✓

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

अमित

Approved By  
HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad

## WATER QUALITY MONITORING

### 3.1 Location of sampling sites

(Refer Plate No. – II)

#### i) Mine Discharge of Dhansar UGP (MW7)

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### 3.3 Results & Interpretations

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

## WATER QUALITY DATA (EFFLUENT WATER- FOUR PARAMETERS)

Name of the Cluster: Cluster -VII		Month: OCT.2020	Name of the Station: Mine Discharge of Dhansar UGP	
Sl. No.	Parameters	MW7 First Fortnight	MW7 Second Fortnight	As per MOEF General Standards for schedule VI
		05.10.2020	27.10.2020	
1	Total Suspended Solids	40	33	100 (Max)
2	pH	6.85	6.77	5.5 - 9.0
3	Oil & Grease	<2.0	<2.0	10 (Max)
4	COD	28	32	250 (Max)

All values are expressed in mg/lit except pH.

अग्रिम रक्षक राबुल

Analysed By  
JSA/SA/SSA

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

अभिमत  
Approved By  
HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad

## WATER QUALITY MONITORING

### 3.1 Location of sampling sites

(Refer Plate No. – II)

#### i) Mine Discharge of Dhansar UGP (MW7)

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

### 3.2 Methodology of sampling and analysis

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

### 3.3 Results & Interpretations

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

## WATER QUALITY DATA (EFFLUENT WATER- FOUR PARAMETERS)

Name of the Cluster: Cluster -VII		Month: NOV.2020	Name of the Station: Mine Discharge of Dhansar UGP	
Sl. No.	Parameters	MW7 First Fortnight 02.11.2020	MW7 Second Fortnight 16.11.2020	As per MOEF General Standards for schedule VI
1	Total Suspended Solids	48	47	100 (Max)
2	pH	6.6	7.75	5.5 - 9.0
3	Oil & Grease	<2.0	<2.0	10 (Max)
4	COD	28	24	250 (Max)

All values are expressed in mg/lit except pH.

सुमान उरु राहुल

Analysed By  
JSA/SA/SSA

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

अभिषेक

Approved By  
HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad

## WATER QUALITY MONITORING

### 3.1 Location of sampling sites

(Refer Plate No. – II)

#### i) Mine Discharge of Dhansar UGP (MW7)

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

### 3.2 Methodology of sampling and analysis

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

### 3.3 Results & Interpretations

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

## WATER QUALITY DATA (EFFLUENT WATER- FOUR PARAMETERS)

Name of the Cluster: Cluster -VII		Month: DEC.2020	Name of the Station: Mine Discharge of Dhansar UGP	
Sl. No.	Parameters	MW7 First Fortnight	MW7 Second Fortnight	As per MOEF General Standards for schedule VI
		07.12.2020	28.12.2020	
1	Total Suspended Solids	41	34	100 (Max)
2	pH	7.02	7.23	5.5 - 9.0
3	Oil & Grease	<2.0	<2.0	10 (Max)
4	COD	16	12	250 (Max)

All values are expressed in mg/lit except pH.

अमान रंजन रावत  
Analysed By  
JSA/SA/SSA

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

अमित  
Approved By  
HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad

## WATER QUALITY MONITORING

### 3.1 Location of sampling sites

(Refer Plate No. – II)

#### i) Mine Discharge of Dhansar UGP (MW7)

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

### 3.2 Methodology of sampling and analysis

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

### 3.3 Results & Interpretations

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

## WATER QUALITY DATA (EFFLUENT WATER- FOUR PARAMETERS)

Name of the Cluster: Cluster -VII		Month: JAN. 2021	Name of the Station: Mine Discharge of Dhansar UGP	
Sl. No.	Parameters	MW7 First Fortnight	MW7 Second Fortnight	As per MOEF General Standards for schedule VI
		04.01.2021	25.01.2021	
1	Total Suspended Solids	35	37	100 (Max)
2	pH	7.55	7.24	5.5 - 9.0
3	Oil & Grease	<2.0	<2.0	10 (Max)
4	COD	24	28	250 (Max)

All values are expressed in mg/lit except pH.

सुमान रंजन राय  
Analysed By  
JSA/SA/SSA

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

अशोक  
Approved By  
HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad



## WATER QUALITY MONITORING

### 3.1 Location of sampling sites

(Refer Plate No. – II)

#### i) Mine Discharge of Dhansar UGP (MW7)

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

### 3.2 Methodology of sampling and analysis

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

### 3.3 Results & Interpretations

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

## WATER QUALITY DATA (EFFLUENT WATER- FOUR PARAMETERS)

Name of the Cluster: Cluster -VII		Month: FEB. 2021	Name of the Station: Mine Discharge of Dhansar UGP	
Sl. No.	Parameters	MW7 First Fortnight	MW7 Second Fortnight	As per MOEF General Standards for schedule VI
		10.02.2021	16.02.2021	
1	Total Suspended Solids	36	36	100 (Max)
2	pH	7.61	7.44	5.5 - 9.0
3	Oil & Grease	<2.0	<2.0	10 (Max)
4	COD	28	24	250 (Max)

All values are expressed in mg/lit except pH.

अज्ञान रंज राहुल

Analysed By  
JSA/SA/SSA

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Approved By  
HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad

## **WATER QUALITY** **(MINE WATER- 27 PARAMETERS)**

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

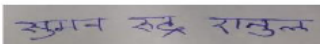
Year : 2020-21

Name of the Cluster : **Cluster - VII**


Period: **Q. E. DEC, 2020.**

<b>Effluent water of BCCL Mines</b>					<b>Date of Sampling:</b>
<b>Sample Code : Mine Water Discharge Dhansar UGP MW-7</b>					<b>07.12.2020</b>
<b>Sl.No.</b>	<b>Parameter</b>	<b>Results</b>	<b>Detection Limit</b>	<b>MOEF -SCH-VI STANDARDS Class 'A'</b>	<b>BIS Standard &amp; Method</b>
1	Ammonical Nitrogen, mg/l, Max	0.06	0.02	50.0	IS 3025/34:1988, R : 2009, Nessler's
2	Arsenic (as As), mg/l, Max	<0.006	0.006	0.2	IS 3025, part 37:1988, R-2019/ APHA 23 <sup>rd</sup> Edition AAS-VGA
3	B.O.D (3 days 27°C), mg/l, Max	<2.0	2.00	30.0	IS 3025 /44:1993,R:2003 3 day incubation at 27°C
4	Colour	Colourless	Qualitative	Qualitative	Physical/Qualitative
5	COD, mg/l, Max	16	4.00	250.0	APHA 23rd Edition 5220 C Titrimetric Method
6	Copper (as Cu), mg/l, Max	<0.2	0.2	3.0	IS 3025(Part42): 1992 R : 2019, AAS-Flame
7	Dissolved Phosphate (as P), mg/l, Max	<0.3	0.30	5.0	IS 3025/ 31, 1988 R 2019
8	Fluoride (as F) mg/l, Max	0.84	0.2	2.0	APHA, 23RD Edition, Page 4-90 to , 4500 -F- D (SPADNS Method)
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	IS 3025 (Part 52) : 2003, Reaffirmed 2019
11	Iron (as Fe), mg/l, Max	<0.2	0.2	3.0	IS 3025 (Part 53) : 2003, R : 2019 , AAS-Flame
12	Lead (as Pb), mg/l, Max	<0.005	0.005	0.1	APHA, 23 <sup>rd</sup> Edition, AAS-GTA
13	Manganese(as Mn), mg/l, Max	0.28	0.2	2.0	IS-3025(Part 59):2006, R 2017 AAS-Flame /APHA, 23 <sup>rd</sup> Edition, 3111B, AAS-Flame
14	Nickel (as Ni), mg/l, Max	<0.1	0.1	3.0	IS-3025(Part 54):2003, R:2019 AAS-Flame
15	Nitrate Nitrogen, mg/l, Max	5.75	0.50	10.0	APHA, 23 rd Edition,UV- Spectrophotometric
16	Oil & Grease, mg/l, Max	<2.0	2.00	10.0	IS 3025/39:1991, R : 2019, Partition Gravimetric
17	pH value	7.02	2.5	5.5 to 9.0	IS-3025/11:1983, R-2017, Electrometric
18	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH),mg/l, Max	<0.002	0.002	1.0	APHA, 23rd Edition 4-Amino Antipyrine
19	Selenium, mg/l, Max	<0.007	0.007	0.05	IS 3025, part 56:2003, R-2019/APHA 23 <sup>rd</sup> Edition, AAS-VGA
20	Sulphide (as S <sup>2-</sup> ) mg/l Max.	<0.005	0.005	2.0	APHA 23 <sup>rd</sup> Edition Methylene Blue Method
21	Temperature (°C )	26.3	Shall not exceed 5° C above the receiving temp.		IS-3025/09:1984, Thermometric
22	Total Chromium (as Cr), mg/l, Max	<0.1	0.1	2.0	IS-3025(Part 52):2003, R:2019 AAS-Flame
23	Total Kjeldahl Nitrogen, mg/l, Max	1.4	1.00	100.0	IS:3025/34:1988, Nessler's
24	Total Residual Chlorine, mg/l, Max	<0.04	0.04	1.0	APHA, 23rd Edition , 4500-C1 B. (Iodometric Method-I)
25	Total Suspended Solids, mg/l, Max	41	10.00	100.0	IS 3025/17:1984, R :2017, Gravimetric
26	Zinc (as Zn), mg/l, Max	<0.1	0.1	5.0	IS 3025 /49 : 1994, R : 2019, AAS-Flame
27	Odour	Agreeable	Agreeable	Qualitative	APHA, 23rd Edition , 2150-C

\*All values are expressed in mg/lit unless specified.

  
Analysed By  
JSA/SA/SSA

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

  
Approved By  
HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad

## NOISE LEVEL QUALITY MONITORING

### 4.1 Location of sampling sites

- i) Kusunda OCP (N10)
- ii) Hurriladih UGP (N28)
- iii) Dobari UGP (N11)
- iv) Moonidih Washery (N29)

### 4.2 Methodology of sampling and analysis

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

### 4.3 Results & Interpretations

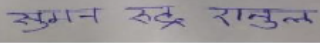
Ambient noise levels were recorded during day time and the observed values were compared with standards prescribed by MoEF&CC. The results of Noise levels recorded during day time on fortnightly basis are presented in tabular form along with the applicable standard permissible limits. The observed values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

## NOISE LEVEL DATA


Name of the Project : Cluster -VII			Month: MARCH. 2021		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Kusunda OCP (N10)	Industrial area	03.03.2021	63.5	75
2	Kusunda OCP (N10)	Industrial area	17.03.2021	62.5	75
3	Dobari UGP (N11)	Industrial area	03.03.2021	57	75
4	Dobari UGP (N11)	Industrial area	17.03.2021	56.1	75
5	Hurriladih UGP (N28)	Industrial area	02.03.2021	56.2	75
6	Hurriladih UGP (N28)	Industrial area	18.03.2021	56.1	75
7	Moonidih Washery (N29)	Industrial area	02.03.2021	58.3	75
8	Moonidih Washery (N29)	Industrial area	16.03.2021	57.7	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,

  
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 JSA/SA/SSA

  
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 RI-2, CMPDI, Dhanbad

  
 Approved By  
 HOD(In-charge) Environment  
 RI-2, CMPDI, Dhanbad

## NOISE LEVEL QUALITY MONITORING

### 4.1 Location of sampling sites

- i) Kusunda OCP (N10)
- ii) Hurriladih UGP (N28)
- iii) Dobari UGP (N11)
- iv) Moonidih Washery (N29)

### 4.2 Methodology of sampling and analysis

Noise level measurements in form of 'L<sub>EQ</sub>' 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

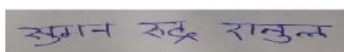
Ambient noise levels were recorded during day time and the observed values were compared with standards prescribed by MoEF&CC. The results of Noise levels recorded during day time on fortnightly basis are presented in tabular form along with the applicable standard permissible limits. The observed values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

## NOISE LEVEL DATA

Name of the Project: <b>Cluster -VII</b>			Month: <b>OCT.2020</b>		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Kusunda OCP (N10)	Industrial area	15.10.2020	57.7	75
2	Kusunda OCP (N10)	Industrial area	30.10.2020	66.1	75
3	Dobari UGP (N11)	Industrial area	15.10.2020	54.3	75
4	Dobari UGP (N11)	Industrial area	30.10.2020	56.4	75
5	Hurriladih UGP (N28)	Industrial area	05.10.2020	62.3	75
6	Hurriladih UGP (N28)	Industrial area	23.10.2020	63.1	75
7	Moonidih Washery (N29)	Industrial area	09.10.2020	60.7	75
8	Moonidih Washery (N29)	Industrial area	29.10.2020	62.6	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,

  
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 JSA/SA/SSA

  
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 Lab In Charge  
 RI-2, CMPDI, Dhanbad

  
 Approved By  
 HOD(In-charge) Environment  
 RI-2, CMPDI, Dhanbad

## NOISE LEVEL QUALITY MONITORING

### 4.1 Location of sampling sites

- i) Kusunda OCP (N10)
- ii) Hurriladih UGP (N28)
- iii) Dobari UGP (N11)
- iv) Moonidih Washery (N29)

### 4.2 Methodology of sampling and analysis

Noise level measurements in form of 'L<sub>EQ</sub>' 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 time and the observed values were compared with standards prescribed by MoEF&CC. The results of Noise levels recorded during day time on fortnightly basis are presented in tabular form along with the applicable standard permissible limits. The observed values in terms of L<sub>EQ</sub> are presented. The observed values at all the monitoring locations are found to be within permissible limits.

## NOISE LEVEL DATA

Name of the Project: Cluster -VII			Month: NOV.2020		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Kusunda OCP (N10)	Industrial area	12.11.2020	57.7	75
2	Kusunda OCP (N10)	Industrial area	26.11.2020	66.1	75
3	Dobari UGP (N11)	Industrial area	12.11.2020	54.3	75
4	Dobari UGP (N11)	Industrial area	26.11.2020	56.4	75
5	Hurrladih UGP (N28)	Industrial area	03.11.2020	62.3	75
6	Hurrladih UGP (N28)	Industrial area	16.11.2020	63.1	75
7	Moonidih Washery (N29)	Industrial area	06.11.2020	60.7	75
8	Moonidih Washery (N29)	Industrial area	27.11.2020	62.6	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,

अनिल कुमार राय  
Analysed By  
JSA/SA/SSA

Checked By  
Lab In Charge  
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Approved By  
HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad



## NOISE LEVEL QUALITY MONITORING

### 4.1 Location of sampling sites

- i) Kusunda OCP (N10)
- ii) Hurriladih UGP (N28)
- iii) Dobari UGP (N11)
- iv) Moonidih Washery (N29)

### 4.2 Methodology of sampling and analysis

Noise level measurements in form of 'L<sub>EQ</sub>' 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

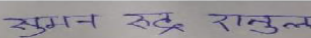
Ambient noise levels were recorded during day time and the observed values were compared with standards prescribed by MoEF&CC. The results of Noise levels recorded during day time on fortnightly basis are presented in tabular form along with the applicable standard permissible limits. The observed values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

## NOISE LEVEL DATA


Name of the Project : Cluster -VII			Month: DEC.2020		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Kusunda OCP (N10)	Industrial area	08.12.2020	54.1	75
2	Kusunda OCP (N10)	Industrial area	21.12.2020	58.1	75
3	Dobari UGP (N11)	Industrial area	08.12.2020	56.2	75
4	Dobari UGP (N11)	Industrial area	21.12.2020	60.3	75
5	Hurriladih UGP (N28)	Industrial area	03.12.2020	57.3	75
6	Hurriladih UGP (N28)	Industrial area	18.12.2020	55.4	75
7	Moonidih Washery (N29)	Industrial area	10.12.2020	57.2	75
8	Moonidih Washery (N29)	Industrial area	29.12.2020	55.8	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,

  
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## NOISE LEVEL QUALITY MONITORING

### 4.1 Location of sampling sites

- i) Kusunda OCP (N10)
- ii) Hurriladih UGP (N28)
- iii) Dobari UGP (N11)
- iv) Moonidih Washery (N29)

### 4.2 Methodology of sampling and analysis

Noise level measurements in form of 'L<sub>EQ</sub>' 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

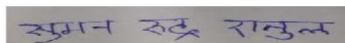
Ambient noise levels were recorded during day time and the observed values were compared with standards prescribed by MoEF&CC. The results of Noise levels recorded during day time on fortnightly basis are presented in tabular form along with the applicable standard permissible limits. The observed values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

## NOISE LEVEL DATA

Name of the Project: Cluster -VII			Month: JAN. 2021		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Kusunda OCP (N10)	Industrial area	06.01.21	65.4	75
2	Kusunda OCP (N10)	Industrial area	22.01.21	61.6	75
3	Dobari UGP (N11)	Industrial area	06.01.21	60.3	75
4	Dobari UGP (N11)	Industrial area	22.01.21	59.7	75
5	Hurrladih UGP (N28)	Industrial area	04.01.21	55.4	75
6	Hurrladih UGP (N28)	Industrial area	18.01.21	56.2	75
7	Moonidih Washery (N29)	Industrial area	04.01.21	58.3	75
8	Moonidih Washery (N29)	Industrial area	18.01.21	59.2	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,

  
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 RI-2, CMPDI, Dhanbad



## NOISE LEVEL QUALITY MONITORING

### 4.1 Location of sampling sites

- i) Kusunda OCP (N10)
- ii) Hurriladih UGP (N28)
- iii) Dobari UGP (N11)
- iv) Moonidih Washery (N29)

### 4.2 Methodology of sampling and analysis

Noise level measurements in form of 'L<sub>EQ</sub>' 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

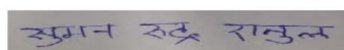
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## NOISE LEVEL DATA

Name of the Project: Cluster -VII			Month: FEB. 2021		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Kusunda OCP (N10)	Industrial area	04.02.2021	55.9	75
2	Kusunda OCP (N10)	Industrial area	26.02.2021	56.3	75
3	Dobari UGP (N11)	Industrial area	04.02.2021	50.1	75
4	Dobari UGP (N11)	Industrial area	26.02.2021	53.1	75
5	Hurrladih UGP (N28)	Industrial area	11.02.2021	56.4	75
6	Hurrladih UGP (N28)	Industrial area	22.02.2021	57.3	75
7	Moonidih Washery (N29)	Industrial area	11.02.2021	59.2	75
8	Moonidih Washery (N29)	Industrial area	22.02.2021	58.3	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,

  
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## **Annexure VI**

### **Status of Periodical Medical Examination**

Sl. No.	Name of Area/ Mine/ Office	October	November	December	January	February*	March*
1	ADIC	60	68	35	15	0	0
2	ENA	4	1	2	3	0	0
3	Kusunda	40	45	74	33	0	0
4	Burragarh	3	2	2	3	0	0
4	Hurrladih	2	1	4	2	0	0
5	Kustore Colliery	1	2	1	1	0	0
6	Rajapur/S-Jharia	20	21	7	0	0	0
7	AEBSC	7	5	11	0	0	0
<b>Total</b>		137	145	136	57	<b>0</b>	<b>0</b>

\*(PME abandoned temporally due to COVID-19 upsurge)

**Annexure VII****Training**

Sl. No.	Month	Refresher Training	Initial Training	Contractual Worker	Change of Job	Special Training
1	October	58	1	16	0	18
2	November	39	5	17	0	26
3	December	43	4	24	0	15
4	January	51	1	19	0	26
5	February	66	0	17	0	24
6	March	36	1	10	0	12
Total		293	12	103	0	121

## Annexure VIII

Area	Masks		Sanitizers(Ltrs)		Soaps /Liquid Hand		Bleaching Powder (Kg)		Spirit(Ltrs)	
	Procure d/Distri buted	Stock at Hand	Procure d/Distri buted	Stock at Hand	Procure d/Distri buted	Stock at Hand	Procure d/Distri buted	Stock at Hand	Procured /Distribu ted	Stock at Hand
Kusunda	6900	Nil	180	30	230	Nil	2850	600	30	NIL
<b>Other Actions by the Management at Kusunda Area :</b>										
1. Hand washing facility along with soap have been made available at all attendance point and working place of units and Area Estbl. under Kusunda Area.										
2. Bleaching powder being continuously spread in units, Area Estbl. and all localities under Kusunda Area which includes Jawahar Nagar Colony, Jha Colony , CISF Camp , Coal Board Colony, Ropeway Colony and New Karmik Nagar Colony.										
3. HEMM equipment have been sanitized at Departmental Patch of ADIC , Kusunda Area										
4. Establishments are being sanitized completely .										
5. Awareness program run at Area, Units and Colonies making employees aware about social distancing and facts related to COVID 19. Pamphlets, Banners, Hand Bills distributed in all units and Area Estbl.										
6. ID Cards distributed amongst all contract workers for the purpose of emergency duty related to production in Kusunda Area, BCCL										
7. Phenyl -4 Bottles of 5 Ltrs each distributed in units and Area Estbl.										
8. One Thermal Scanner procured. One More thermal scanner is placed under procurement.Total 161 Employees and Executives have been scanned with Thermal Scanner.										
9. Surgical Gloves (6 Pieces) have been currently placed under procurement.										
10. Food material distributed by the management of Kusunda Area at Jiwan Jyoti Ashram Kusunda, 9 No. Slum, 27 No. Slum, Ena Colliery , Gondudih Colliery ,Shiv Mandir at Godhur , Rise Area near MRS Dhansar and Lahbera Manjhi Basti.										
11. Distribution of Mask and Handwash to the nearby Colonies under Under Kusunda Area										
12. New Karmik Nagar Colony has been sanitized.										
12. ADIC and ENA office has been sanitized.										
13. Food materials (1200 Packets) distributed by the management of Kusuda Area under CSR Fund at : - Rise Area & Tikia Para of ADIC : Kusunda Bhuiya toli , Kusunda railway crossing & Gondudih Munda basti of Gondudih OP : Godhur 9 No. Basti: Kurmidih Basti: 10 No. Khas Kusunda Bouri Basti : Kusunda Area Office: Kharikabad Basti : Basseriya & Dharijoba Basti: Bhim Talao Kharikabad										



# COAL INDIA LIMITED



## CORPORATE ENVIRONMENT POLICY

2018



## **Environmental Policy Statement:**

*Coal India Limited(CIL) is committed to promote sustainable development by protecting the environment through integrated project planning & design, prevention/mitigation of pollution, conservation of natural resources, restoration of ecology & biodiversity, recycling/ proper disposal of wastes, addressing climate change and inclusive growth. It also aims to bringing awareness amongst its stakeholders for continual improvement in environmental performances following best practices.*

## **OBJECTIVES:**

**Coal India Limited shall endeavor to:**

- 1. Plan & design projects with due consideration to environmental concerns for Sustainable Development.*
- 2. Conduct mining and associated operation in an environmentally responsible manner to comply with applicable laws and other requirements related to environmental aspects.*
- 3. Prevent pollution of surrounding habitation by continuous monitoring and adopting suitable measures for environment protection.*
- 4. Implement Environment Management Plans in all our mines /projects effectively to mitigate pollution, conservation of natural resources and restoration of ecology & biodiversity.*
- 5. Ensure compliance of all applicable Environmental Clearance& Forestry Clearance conditions and other statutory conditions issued by regulatory agencies.*
- 6. Recycling of wastes on the principle of REDUCE, REUSE and RECYCLE.*
- 7. Put special thrusts on efficient energy utilization / renewable energy as a measure to reduce carbon foot-print.*
- 8. Strive for continual improvement in our environmental performances by setting targets, measuring progress and taking corrective action.*
- 9. Taking measures to render productive post mining land use.*
- 10. Implementation of activities applicable to CIL arising out of International Conventions.*
- 11. Create environmental awareness among the employees and the local communities through pro-active communication and training.*

## ***STRATEGIES FOR IMPLEMENTATION OF ENVIRONMENTAL POLICY:***

### **Back Ground:**

Coal India Limited subscribes to the view of Sustainable Development. Unless the environment can sustain all the developmental activities, any pursuit of development in isolation can cause irreparable damage to the ecosystem and associated environmental attributes. Keeping this view in mind, Coal India Limited attaches top priority towards sustainable development and approved its 'Corporate Environmental Policy' in December 1995, which was subsequently revised in 2012. However the present policy is the amendment of the 2012 Policy and is complimentary to the National Environmental Policy, 2006.

This modification in the present policy is the outcome of the experience gained since 2012 keeping in view the modifications / amendments made time to time in environmental policies and additional stipulation notified by MoEF&CC (Ministry of Environment, Forest& Climate Change) and other organisations concerning mine closure, reclamation of degraded land, environmental clearance etc. and also with the objective of revisiting the corporate policy.

This Policy has a vision of Green Mining and mission of 100% compliance of environmental statutes applicable to coal mining industry.

**Strategies:** Coal India adopts the strategies appended below for effective implementation:

### ***1.MINE/ PROJECT PLANNING & DESIGN FOR SUSTAINABLE DEVELOPMENT:***

- a) Coal being a non-renewal energy source, extraction shall be planned prudently to meet national requirement in a planned way. The projects shall be designed on the principle of Sustainable Development with due consideration to environment, mine closure, safety and aspirations of the stakeholders at the planning& design stage itself with due regard to mine closer plan.
- b) While preparing the Mining plan/project reports, the effort shall be to incorporate latest mining technologies and equipment's with optimal capacity, which are more environment friendly.

- c) All Mining Plan/ project reports will be provided with detailed provisions for ensuring environmental compliances.

## **2. ENVIRONMENTAL IMPACT ASSESSMENT (EIA) & ENVIRONMENT MANAGEMENT PLAN (EMP)**

- a. All mine planning and design shall be environmentally acceptable and operation shall be carried out in such a way as to facilitate the compliance of stipulated environmental standards.
- b. EIA& EMP for all projects shall be formulated as per the approved ToR (Terms of Reference) and public consultations for obtaining Environmental Clearance (EC) from MoEF&CC. Similarly, in the existing projects needing enhancement of production capacities with or without increase in land, change of technology, renewal of lease and change in land use etc. fresh EC is required to be sought as per norms. The projects shall be operated after obtaining Consent to Establish (CTE)/Consent to Operate (CTO) from State Pollution Control Boards (SPCB).
- c. Detailed Mine Closure Plans shall be prepared for all existing and new mines as per the MoC (Ministry of Coal) guidelines.

## **3. COMPLIANCE OF THE STATUTORY REQUIREMENTS:**

The implementation of EMP and fulfillment of all other statutory requirements like conditions of EC, FC and consents to establish & operate, including timely submission of returns to statutory bodies and various agencies, are to be ensured at all levels.

## **4. MEASURES TO MITIGATE POLLUTION:**

### **a) Air Pollution:**

- i) Generation of dust is to be controlled at the source to the possible extent with necessary control measures during drilling, blasting, loading, unloading, CHP transfer points etc.
- ii) Deployment of eco-friendly mining technologies.
- iii) Dust generation is to be minimized along coal / waste transportation routes.
- iv) Mechanized transportation of coal to be encouraged.
- v) Green belt is to be created around the source of dust.

***b) Water pollution:***

- i) The mine water and other effluent shall be treated to ensure the discharge norms as per statute. The treated effluent shall be utilized to the extent possible with a view to achieve maximum water conservation.
- ii) Oil & grease from the effluent shall be removed by Oil & Grease Traps for proper disposal.

***c) Noise / ground vibration:***

- i) All measures to minimize noise pollution will be taken including maintenance of HEMM, equipment and provision of PPE where required.
- ii) Suitable controlled blasting techniques shall be followed to reduce ground vibration as well as noise pollution.

***d) Land reclamation:***

- i) Progressive and concurrent reclamation of mined out areas will be carried out as per approved EIA/EMP and Mine Closure Plan (MCP).
- ii) Slopes of external dumps are the important area to be suitably graded / terraced for effective reclamation and plantation.
- iii) Preservation of top soil is required for future use. Old as well as existing non- active dumps are to be technically and biologically reclaimed.
- iv) Monitoring of reclamation work of all opencast mines will be done through Satellite Surveillance. The outcome shall be put in the websites.

***e) Mine closure plans:***

Mine Closure Plan (MCP) shall be prepared for each mine. MCP are being delineated in two phases viz. progressive and final mine closure. Appropriate funds are set aside and deposited under a special Escrow fund every year as per MoC guidelines, to be utilized for proper and final mine closure.

For mines closed prior to issuance of MoC guidelines (i.e. 27<sup>th</sup> August, 2009) suitable action to be taken as per provisions of Mines Act 1952.

***f) Mine fire***

CIL shall endeavour to reduce occurrence of mine fire and subsidence due to mining activity. Monthly report shall be submitted to top management of the subsidiary and CIL and Quarterly to company board. Action Plan for mine fire control shall be implemented. Monitoring will be done through Satellite Surveillance/other suitable technology.

***g) Monitoring:***

- I. All receptors in and around the mining projects shall be monitored regularly to assess the efficacy of the pollution control / mitigation measures within stipulated standards.
- II. Effect of mining on the hydrology of the area will be monitored through measurement of water level and its quality of nearby wells and bore holes provided for this purpose. Conservation of water through rainwater harvesting shall be taken up.
- III. Area and Unit environmental cells shall have regular interaction with the people in and around the coal mines and other allied units on matters related to environment to take necessary and timely corrective actions.
- V. Environmental initiatives and monitoring through self and third party environment audit shall be conducted for generating useful data for taking corrective actions and mitigation measures as per guidelines.

***h) Other measures:***

- I. Special emphasis shall be given to undertake R&D related to various facets of coal mine environmental management in collaboration with Central Mine Planning and Design Institute (CMPDI) and other competent institutions.
- II. Besides ensuring statutory compliance, the CIL desires to set high standards and continual improvement.
- III. A number of mines and establishments of CIL are ISO 14001 certified and balance mines & establishments shall be ISO 14001 certified in phased manner.
- IV. CSR and R&R policies of CIL are to be incorporated for better planning and implementation of the socio-economic issues of coal mining areas.
- V. The coal mining environmental issues are complex and require multi-disciplinary approach to address the same. CIL will endeavor to enter into MoUs with expert agencies of repute to assist in environment issues and also help in capacity building of CIL executives.
- VI. CIL conduct periodical medical examination (PME) of its work force on routine basis in compliance of the requirement mining rules and regulation, additional test will be done as and when require.

***5. PRESERVATION OF BIO-DIVERSITY:***

- a) This will start from mine planning including technically and biologically reclamation of mined out areas in collaboration with State Forest Departments, Wild Life Divisions, NGOs etc. working in the fields of bio- diversity conservation.



- b) The selection of species for plantation shall be done in consultation with the local community to include the local species and their preferences, if any.

## **6. COAL BENEFICIATION / COAL WASHERIES:**

- a) For beneficiation of Runoff Mines (ROM) coal, washeries are being set up in a phased manner as per requirement and statutes.
- b) Slurry Management System (SMS) in all washeries shall be organized to ensure collection of fines, gainful utilization of rejects viz. power generation in Fluidized Bed Combustion (FBC) plants, selling to brick manufacturers or adopting other environmental friendly disposal options as feasible.
- c) The reject dumps and tailings shall be suitably handled to avoid any contamination.
- d) The effluent from washeries including tailings pond shall be suitably treated and reused to minimize water consumption with zero discharge concept.

## **7. CONSERVATION AND CLEAN TECHNOLOGY:**

- a) R&D projects shall be taken up to promote clean coal technology and improve the existing technologies.
- b) Energy saved is energy produced. Voluntary energy audit to be done for corrective action to reduce carbon footprint.
- c) Clean Development Mechanisms will be explored for reducing emission of Green House Gases by exploration, identification, preparation of projects reports for extraction of methane from Coal Bed, Coal Mine, Abandoned Mine, Ventilation Air, UG Coal Gasification, generation and utilization of renewable energy etc.

## **8. AWARENESS PROGRAMME:**

- a) Publicity to generate awareness through exchange & communication of information, newsletters and periodicals on environment, seminars, work- shops, celebration of World Environment Day etc. at CIL / Subsidiary HQs, Areas & units to be undertaken. Regular training programs to be organized at various levels to inculcate awareness among employees.
- b) Courses on environmental and forestry laws and Environmental

Protection Measures and the Corporate Policy to be organized for project executives for improving knowledge.

- c) CIL to give annual awards for achieving excellence in environment related

issues and activities. These awards will be in recognition for implementation of EMP, land reclamation and compliance of statutes, proper maintenance of air & water quality and noise level.

## **9. WASTE MANAGEMENT:**

CIL will undertake appropriate action for safe handling, storage and disposal of solid waste and hazardous waste generated from its industrial set up and colonies as per relevant rules. The biomedical waste generated from hospitals and dispensaries will be collected and disposed in appropriate facilities created as per statutes. E-waste management and handling of various types of e-waste generated in its operations will be done as per rule.

## **10. CORPORATE ENVIRONMENT RESPONSIBILITY:**

Corporate Environment Responsibility (CER) is mandatory for issuing environmental clearance for all the Greenfield and Brownfield projects as per directives of MoEFCC with effect from 1st May, 2018 (O.M.No.22-65/2017- IAIII dt. 19.06.2018). Budgetary provisions should be kept for implementation of provisions of CER for all the projects which will be submitted to MoEFCC for grant of environmental clearance.

## **11. INCORPORATION OF VIEWS OF STAKEHOLDERS:**

CIL will critically examine and incorporate the viewpoints of various stakeholders like PAPs/PAFs, Parliamentary Committees, Standing Sub-Committees, NGOs etc. CIL being a listed entity with stock exchange, it will also take into consideration the observations/viewpoints of international investors.

## **12. IMPLEMENTATION OF POLICY:**

- i) **Manpower:** CIL shall have environmental divisions at decision making & operational levels in its structure. The environment department shall be set up and strengthened at:
- i) CIL Corporate HQ at Kolkata
  - ii) Subsidiary HQs
  - iii) Areas / Units / Collieries / Workshops /Washeries
  - iv) CMPDI (HQ) & CMPDI Regional Institutes

- ii) **Roles and Responsibilities:** The environmental department, set up at company HQs, Areas and Unit levels with appropriate manpower and resources, shall be responsible for implementation of policy, obtaining EC, FC, consent to establish

& operate, statutes requirements and undertaking mitigation measures besides preparation of action plan every year and also to intimate the status of implementation to the management regularly.

- iii) **Annual Environment Budget (Revenue &Capital):** The Annual Environment Budget (revenue & capital) shall be prepared based on the action plan including monitoring of various bench marks and the budget utilization. The year wise funds earmarked for environmental protection measures shall be kept in separate accounts with Environmental cost code.

### **13. FLEXIBILITY TO THE SUBSIDIARY COMPANIES:**

CEP 2018 will be applicable for all subsidiaries of CIL. The subsidiary company Boards have been authorized to approve necessary modifications in CEP 2018 with reference to unique conditions prevailing at the concerned subsidiary.

### **REVIEW OF ENVIRONMENTAL POLICY:**

In view of the present fast changing social, economic and environmental scenario, this Policy shall be reviewed every 5 years to incorporate the changes in the legal, technical, environmental, economic and social inputs prevailing at that time. Whenever, there is change in National Environmental Policy or other National / State relevant policies, Acts etc, this Corporate Environmental Policy would be reviewed and suitably revised.

\*\*\*\*\*

(7)

Ph: 0326-2204933



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

Letter No.....2650

Dated .....6/7/13.....

From,

Regional Officer,  
Dhanbad

To,

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


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

Sir,

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

Encl-A/a.

Your's faithfully,

  
6/7/13  
( Dinesh Prasad Singh )  
Regional Officer.

Memo.....

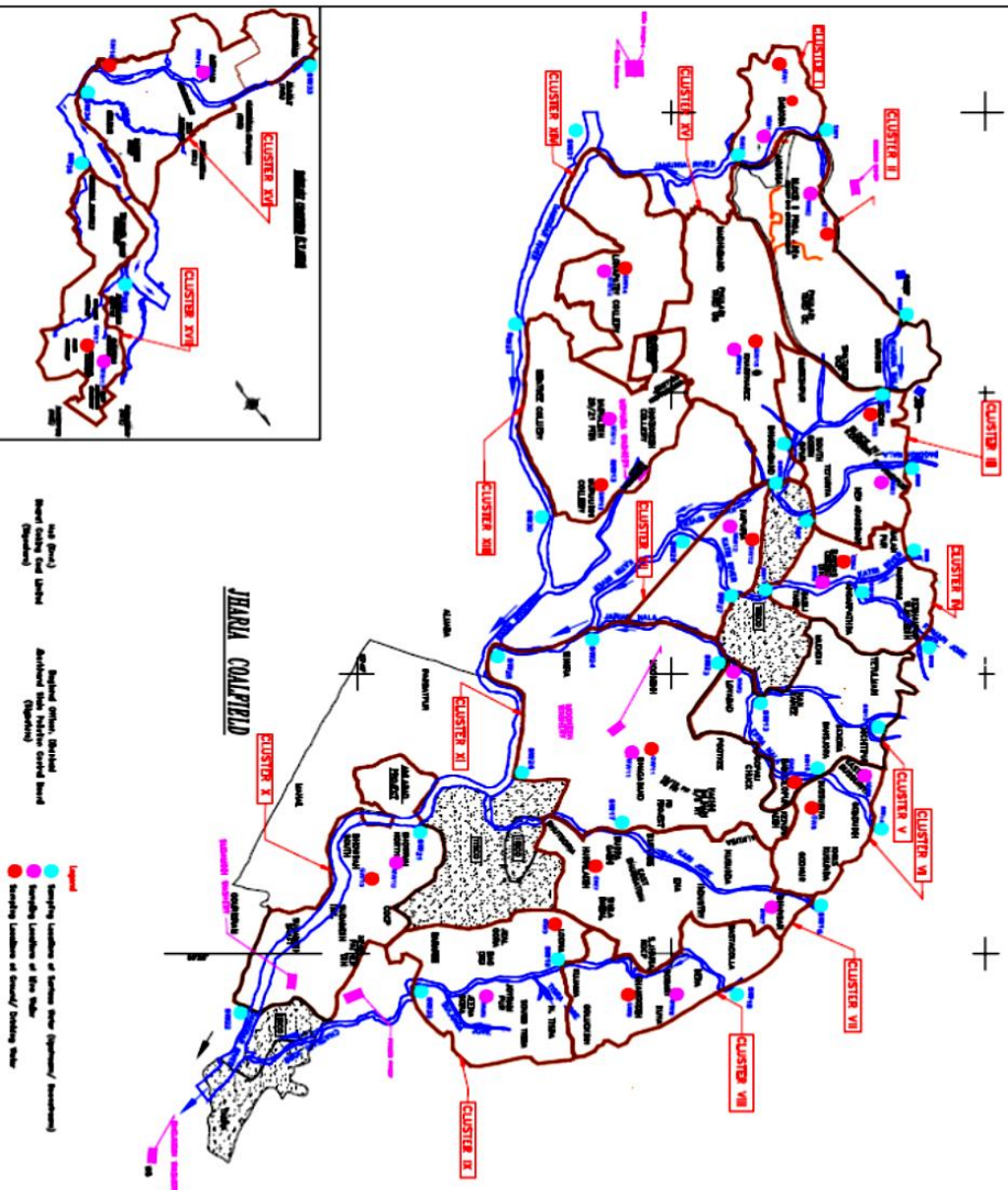
Dhanbad, dated.....

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

Encl-A/a.

(Dinesh Pd. Singh)  
Regional Officer.

# Water Sampling Locations in BCCL



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Cluster	Sampling Point	Location	Cluster	Sampling Point	Location
I	1	1	VI	1	1
I	2	2	VI	2	2
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I	4	4	VI	4	4
I	5	5	VI	5	5
I	6	6	VI	6	6
I	7	7	VI	7	7
I	8	8	VI	8	8
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**INDEX**

Cluster	Sampling Point	Location
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I	100	100



# Location of Air & Noise Monitoring Stations in BCCL

STUDENT'S CURRENT SCHOOL (LASTED)	DATE OF BIRTH (DAY/MONTH/YEAR)
Address (writing address)	STUDENT'S SEX (MALE)
writing address	DATE OF BIRTH
NAME	DATE OF BIRTH
DATE OF BIRTH	DATE OF BIRTH

## **AMBIENT AIR QUALITY MONITORING**

### **2.1 Location of sampling station and their rationale:**

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

#### **Ambient Air Quality Sampling Locations**

##### **I. CORE ZONE Monitoring Location**

**i) Kusunda OCP (A10) : Industrial Area** The location of the sampling station is 23°46' 49.07" N & 86° 24' 15.71" E. The sampler was placed at 1.5 m above the ground level of Safety Office.

**ii) Hurriladih UGP (A28)** The location of the sampling station is 23°44' 4.18" N & 86° 24. 6.21 E. The sampler was placed at 1.5 m above the ground level of Safety Office.

##### **II. BUFFER ZONE Monitoring Location**

**i) Dobari UGP (A11):Industrial Area** The location of the sampling station is 23°45'50.00" N & 86°26' 1.00" E. The sampler was placed at 1.5 m above the ground level of Safety Office.

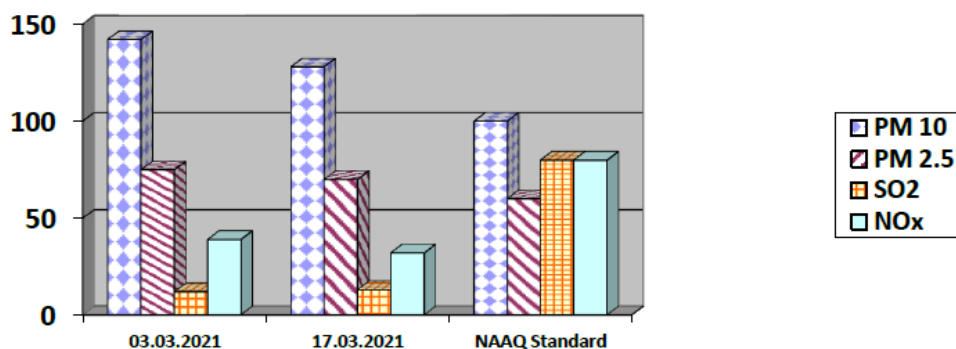
**ii) Moonidih Washery (A29) : Industrial Area** The location of the sampling station is 23°44'26.00" N & 86°21'16.00"E. The sampler was placed at 1.5 m above the ground level of Project office.

## AMBIENT AIR QUALITY DATA

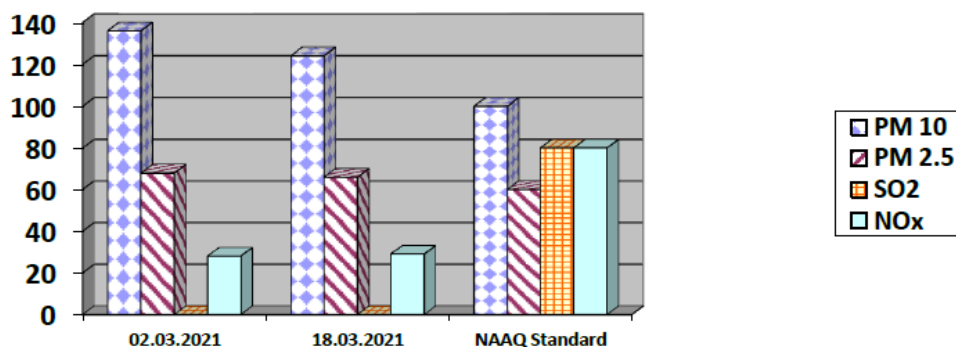
Cluster –VII, Bharat Coking Coal limited    Month: MAR. 2021

Year: 2020-21.

Station Name: Kusunda OCP (A10)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	03.03.2021	142	75	12	39
2	17.03.2021	128	70	13	32
	NAAQ Standard	100	60	80	80



Station Name: Hurriladih UGP (A28)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	02.03.2021	136	68	<10	28
2	18.03.2021	124	66	<10	29
	NAAQ Standard	100	60	80	80

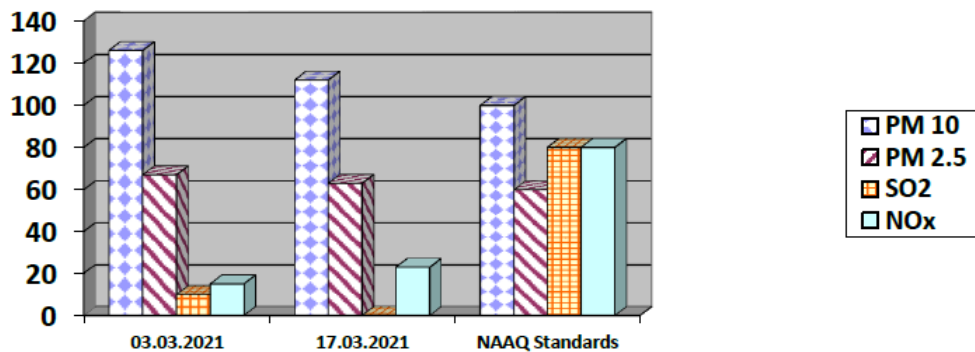


  
 Analysed By  
 JSA/SA/SSA

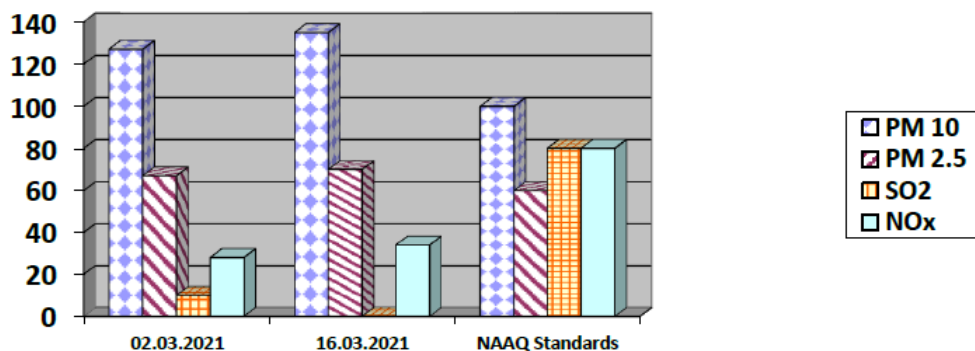
  
 Checked By  
 Lab In Charge  
 RI-2, CMPDI, Dhanbad

  
 Approved By  
 HOD(In-charge) Environment  
 RI-2, CMPDI, Dhanbad

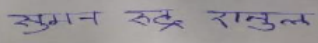
Station Name: Dobari UGP (A11)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	03.03.2021	126	67	10	15
2	17.03.2021	112	63	<10	23
	NAAQ Standards	100	60	80	80



Station Name: Moonidih Washery (A29)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	02.03.2021	127	67	10	28
2	16.03.2021	135	70	<10	34
	NAAQ Standards	100	60	80	80



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

  
 Analysed By  
 JSA/SA/SSA

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

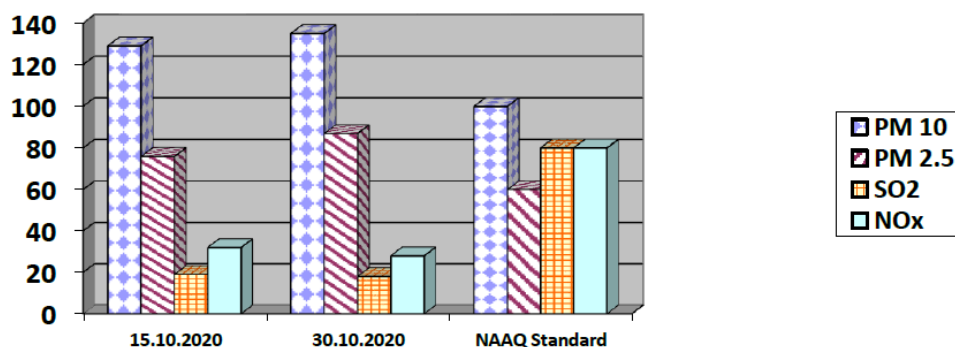
  
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 HOD(In-charge) Environment  
 RI-2, CMPDI, Dhanbad

## AMBIENT AIR QUALITY DATA

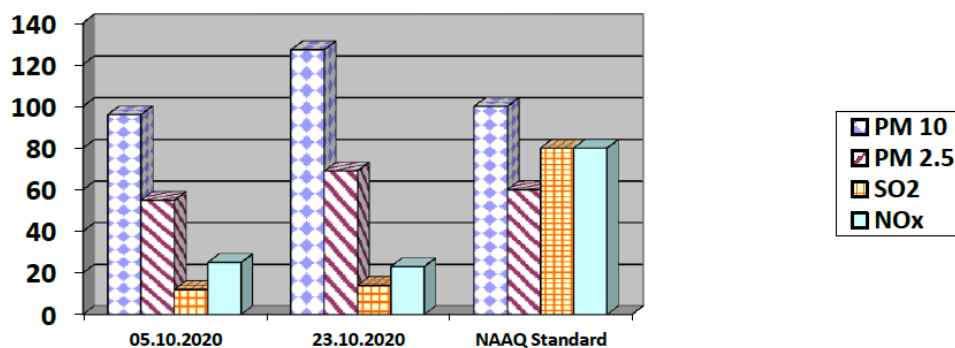
Cluster –VII, Bharat Coking Coal limited    Month: OCT. 2020


Year: 2020-21.

Station Name: Kusunda OCP (A10)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	15.10.2020	129	76	19	32
2	30.10.2020	135	87	18	28
	NAAQ Standard	100	60	80	80




Station Name: Huririladih UGP (A28)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	05.10.2020	96	55	12	25
2	23.10.2020	127	69	14	23
	NAAQ Standard	100	60	80	80



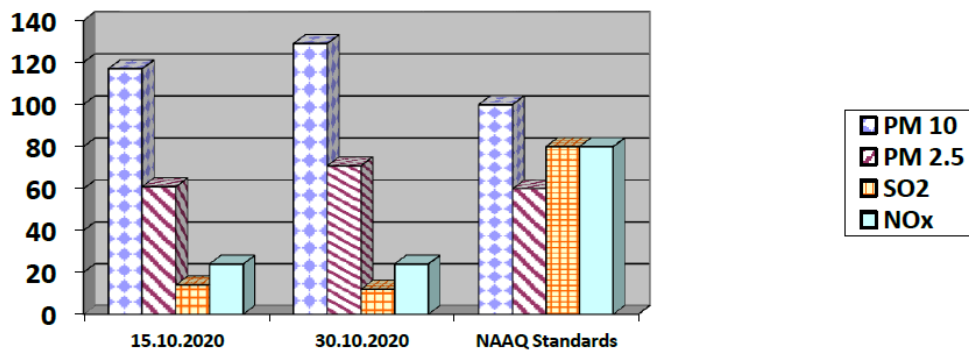
  
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 Lab In Charge  
 RI-2, CMPDI, Dhanbad

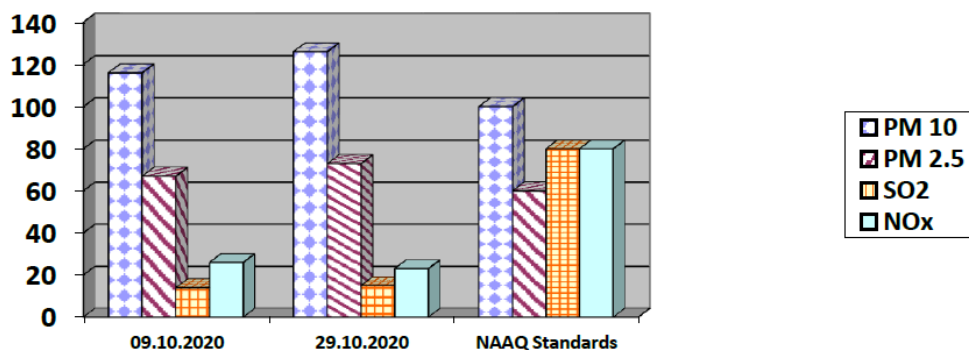
  
 Approved By  
 HOD(In-charge) Environment  
 RI-2, CMPDI, Dhanbad



Station Name: Dobari UGP (A11)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	15.10.2020	117	61	14	24
2	30.10.2020	129	71	12	24
	NAAQ Standards	100	60	80	80




Station Name: Moonidih Washery (A29)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	09.10.2020	116	67	14	26
2	29.10.2020	126	73	15	23
	NAAQ Standards	100	60	80	80



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

  
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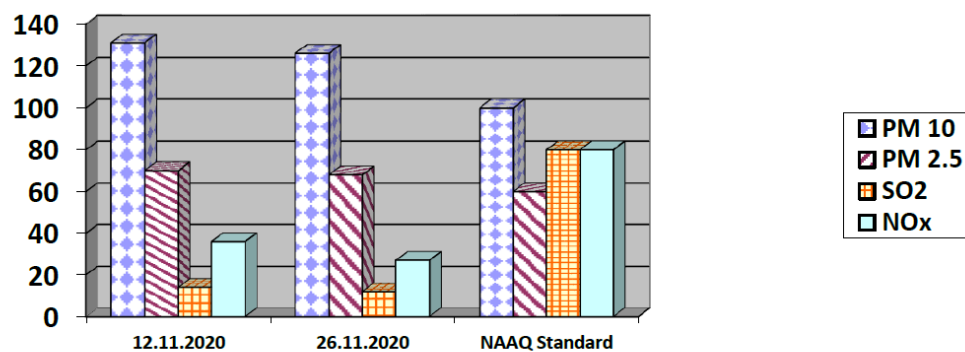
  
 Approved By  
 HOD(In-charge) Environment  
 RI-2, CMPDI, Dhanbad

## AMBIENT AIR QUALITY DATA

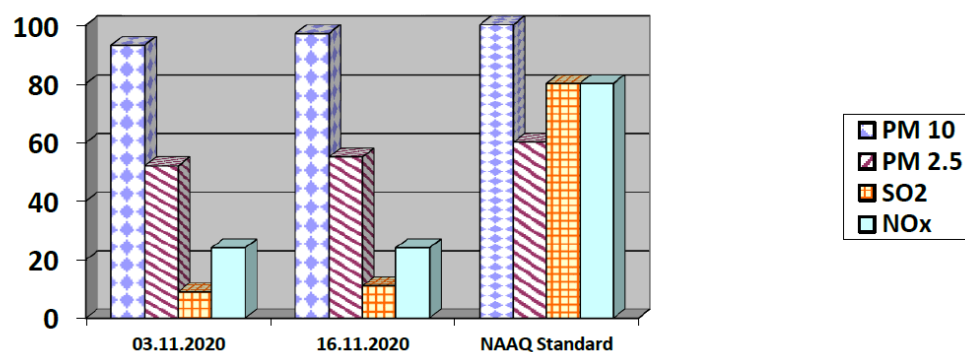
Cluster –VII, Bharat Coking Coal limited    Month: NOV. 2020

Year: 2020-21.

Station Name: Kusunda OCP (A10)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	12.11.2020	131	70	14	36
2	26.11.2020	126	68	12	27
	NAAQ Standard	100	60	80	80



Station Name: Hurriladih UGP (A28)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	03.11.2020	93	52	9	24
2	16.11.2020	97	55	11	24
	NAAQ Standard	100	60	80	80



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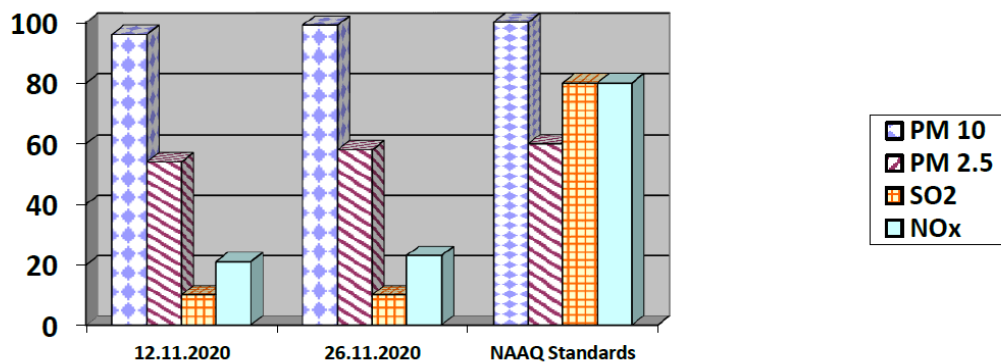
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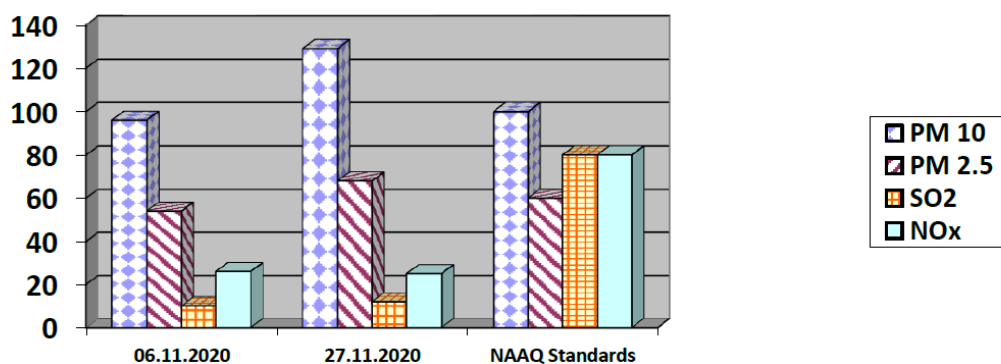
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HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad

Station Name: Dobari UGP (A11)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	12.11.2020	96	54	10	21
2	26.11.2020	99	58	10	23
	NAAQ Standards	100	60	80	80



Station Name: Moonidih Washery (A29)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	06.11.2020	96	54	10	26
2	27.11.2020	129	68	12	25
	NAAQ Standards	100	60	80	80



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

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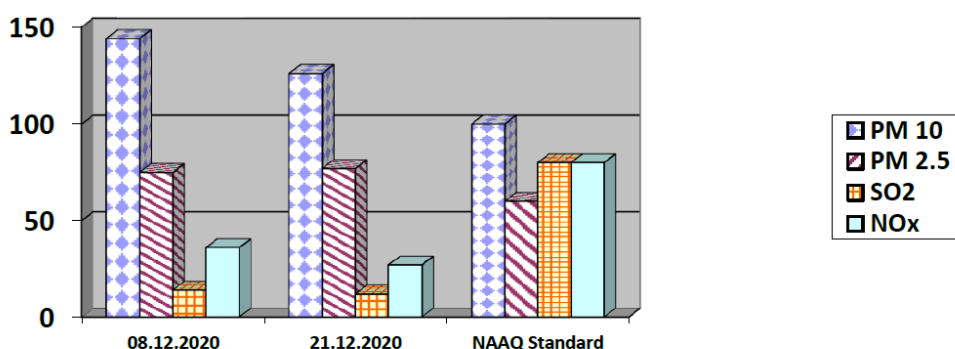
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## AMBIENT AIR QUALITY DATA

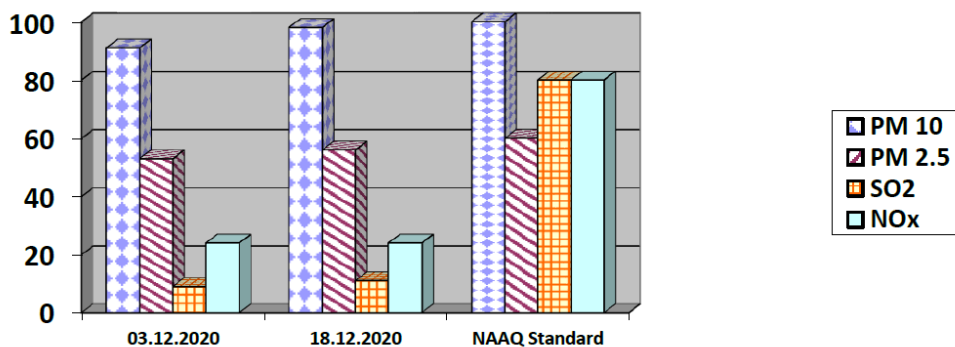
Cluster –VII, Bharat Coking Coal limited Month: DEC. 2020

Year: 2020-21.

Station Name: Kusunda OCP (A10)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	08.12.2020	144	75	14	36
2	21.12.2020	126	77	12	27
	NAAQ Standard	100	60	80	80



Station Name: Hurriladih UGP (A28)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	03.12.2020	91	53	9	24
2	18.12.2020	98	56	11	24
	NAAQ Standard	100	60	80	80

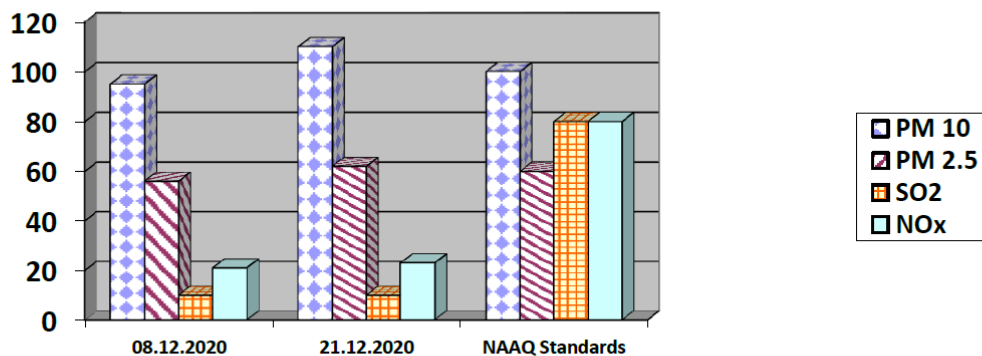


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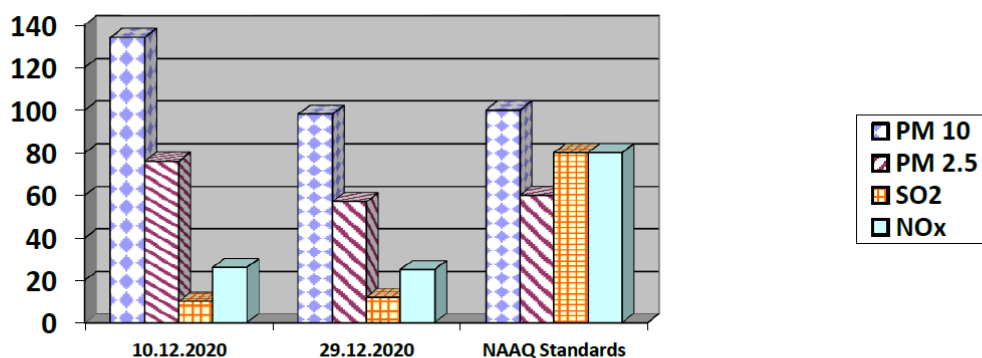
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 RI-2, CMPDI, Dhanbad

Station Name: Dobari UGP (A11)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	08.12.2020	95	56	10	21
2	21.12.2020	110	62	10	23
	NAAQ Standards	100	60	80	80



Station Name: Moonidih Washery (A29)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	10.12.2020	134	76	10	26
2	29.12.2020	98	57	12	25
	NAAQ Standards	100	60	80	80



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

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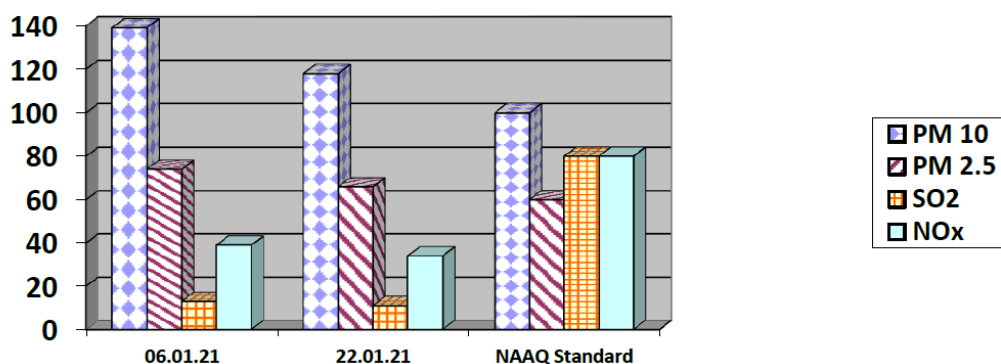


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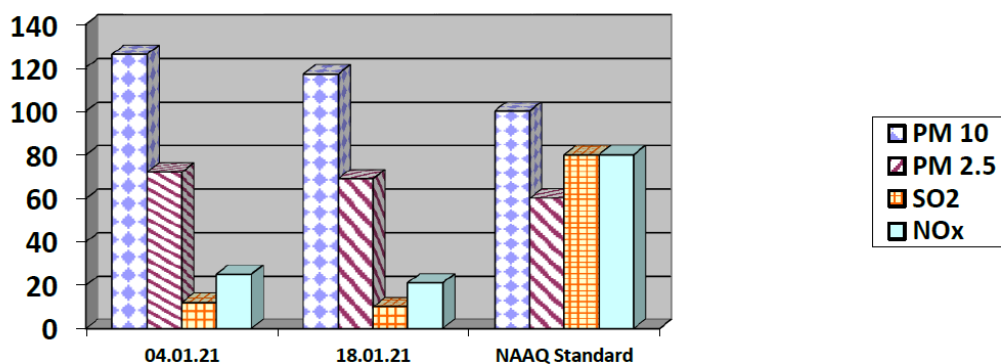
Cluster –VII, Bharat Coking Coal limited    Month: JAN. 2021

Year: 2020-21.

Station Name: Kusunda OCP (A10)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	06.01.21	139	74	13	39
2	22.01.21	118	66	11	34
	NAAQ Standard	100	60	80	80



Station Name: Huririladih UGP (A28)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	04.01.21	126	72	12	25
2	18.01.21	117	69	10	21
	NAAQ Standard	100	60	80	80



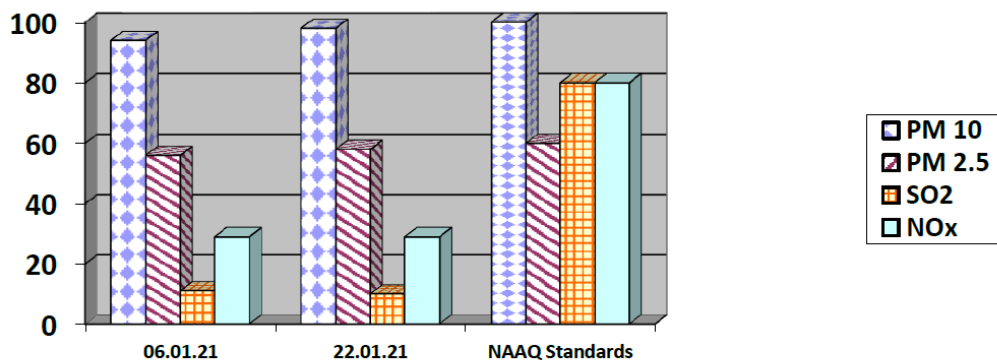
सुमान रंजु राहुल

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JSA/SA/SSA

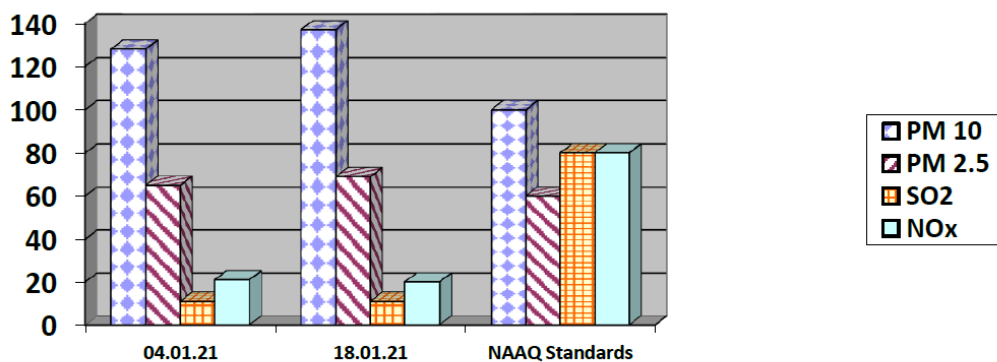
Checked By  
Lab In Charge  
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RI-2, CMPDI, Dhanbad

Station Name: Dobari UGP (A11)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	06.01.21	94	56	11	29
2	22.01.21	98	58	10	29
	NAAQ Standards	100	60	80	80



Station Name: Moonidih Washery (A29)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	04.01.21	128	65	11	21
2	18.01.21	137	69	11	20
	NAAQ Standards	100	60	80	80



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

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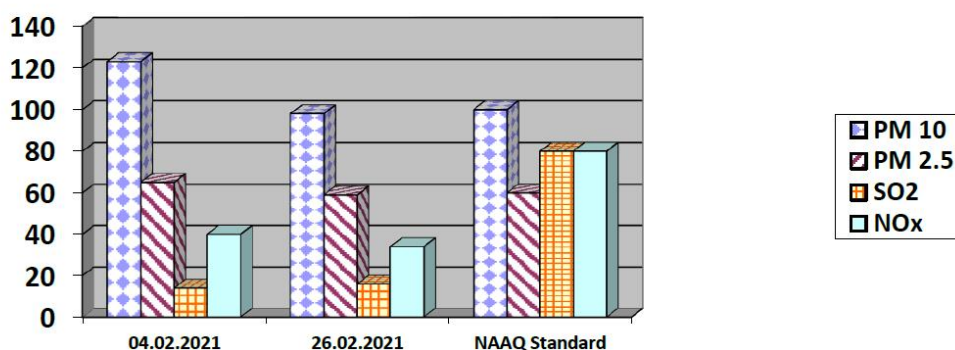
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## AMBIENT AIR QUALITY DATA

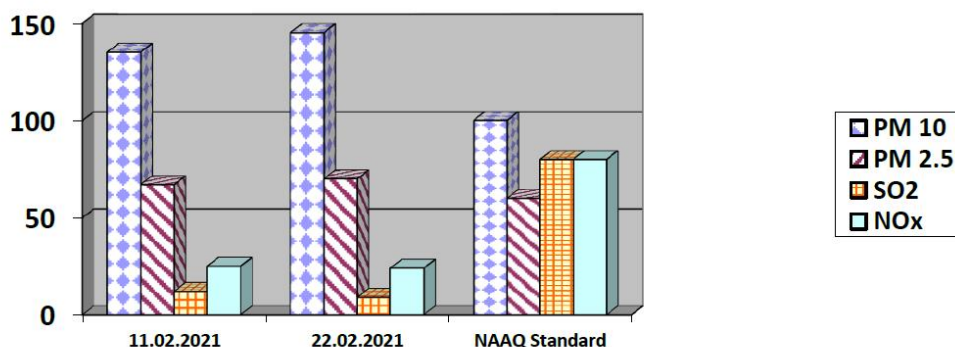
Cluster –VII, Bharat Coking Coal limited Month: FEB. 2021

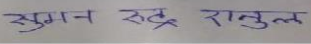
Year: 2020-21.

Station Name: Kusunda OCP (A10)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	04.02.2021	123	65	14	40
2	26.02.2021	98	59	16	34
	NAAQ Standard	100	60	80	80



Station Name: Hurriladih UGP (A28)		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	11.02.2021	135	67	12	25
2	22.02.2021	145	70	9	24
	NAAQ Standard	100	60	80	80

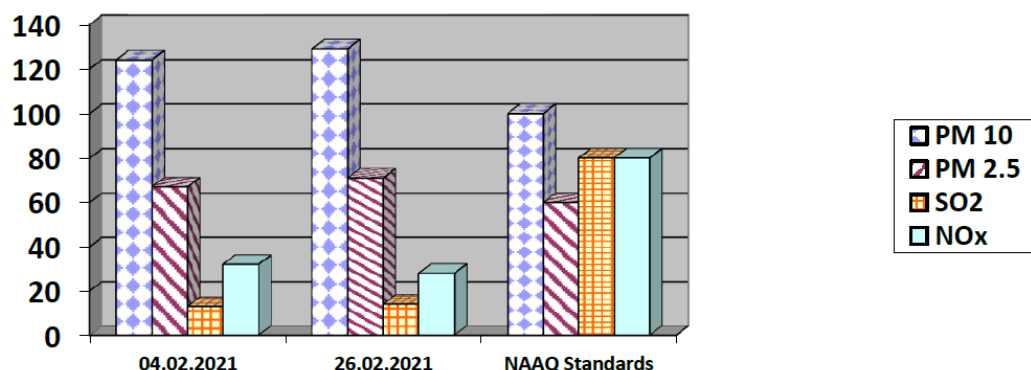


  
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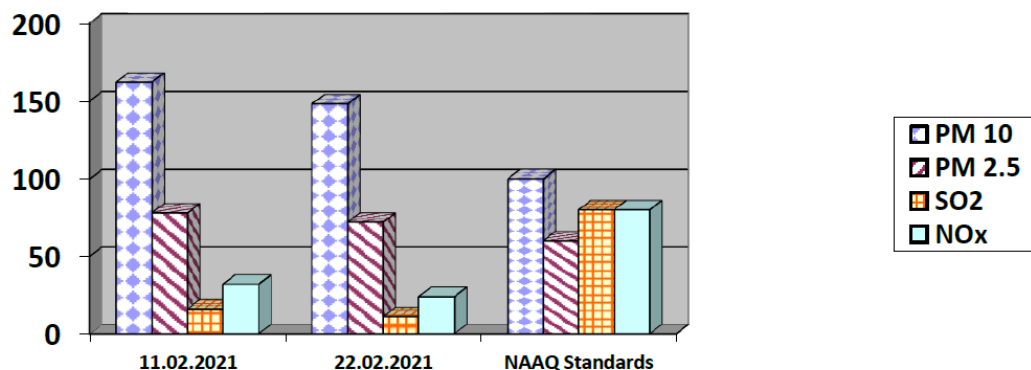
  
 Checked By  
 Lab In Charge  
 RI-2, CMPDI, Dhanbad

  
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 RI-2, CMPDI, Dhanbad

Station Name: Dobari UGP (A11)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	04.02.2021	124	67	13	32
2	26.02.2021	129	71	14	28
	NAAQ Standards	100	60	80	80



Station Name: Moonidih Washery (A29)		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>
1	11.02.2021	162	78	16	32
2	22.02.2021	148	72	11	24
	NAAQ Standards	100	60	80	80



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

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HOD(In-charge) Environment  
RI-2, CMPDI, Dhanbad



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## **GROUNDWATER LEVEL & QUALITY REPORT**

### **FOR CLUSTER OF MINES, BCCL**

**(Assessment year – 2020-21)**

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

**JHARIA COALFIELD AND RANIGANJ COALFIELD (PART)**

**For**  
**(BHARAT COKING COAL LIMITED)**

**(A Subsidiary of Coal India Limited)**

**KOYLA BHAWAN (DHANBAD)**

**Prepared by**  
**Hydrogeology Department**  
**Exploration Division**  
**CMPDI (HQ), Ranchi**

**MARCH – 2021**



## G. GROUND WATER LEVEL OF CLUSTER-VII

Cluster-VII consists of fourteen mines namely; Kusunda Area, Bastacolla Area and PB Area B.C.C.L (Jharia Coalfield) is located in Dhanbad district of Jharkhand. Cluster-VII consists of coal mines; Dhansar UG, Dhansar OCP, Kusunda OCP and Viswakarma OCP (proposed) are under the administrative control of Kusunda Area and Industry UG (closed), Alkusa UG, Ena OCP, S.Jharia/Rajapur OCP, Burragarh UG, Simlabahal UG, Huririladih UG, Bhutgoria UG (Re-opening), Kustore UG (closed) and E.Bhuggatdih UG (closed) are under Bastacolla and PB Area of BCCL. This Cluster of mines is located in east central part of Jharia Coalfield in Dhanbad district of Jharkhand. The life of the project works out more than 30 years considering annual target production of 8.226 MTPA (Toposheet no – 73 I/6).

The present leasehold area of Cluster-VII is 2127.70 Ha. The area has a general undulating topography with general slope towards south. The RL varies from 172 m to 221 m above M.S.L. Kari Jore, Chatkari Jore and its tributaries are controlling the drainage pattern of the area. The area comes under the watershed of Kari Jore and Chatkari Jore.

Monitoring stations (**D-3, D-4, D-33, D-34, D-47, D-55 and D-80**) are located in the core zone of the mine area. Water level monitoring in these monitoring stations has done in the months of May'20, August'20, and Nov'20 and January'21, the Ground water level data enclosed in the table below:

Sl No.	Well No.	Location	Water level (bgl in meters)											
			2020-21				2019-20				2018-19			
			May	Aug	Nov	Jan	May	Aug	Nov	Jan	Feb	May	Aug	Nov
1	D-3	Dhansar	5.40	0.56	1.38	1.90	1.75	1.05	1.30	1.45	1.65	3.43	1.50	2.45
2	D-4	Jharia	3.41	0.51	1.41	2.26	2.81	1.16	1.71	2.16	1.21	1.91	0.91	1.56
3	D33	Kustore	3.65	0.48	1.45	1.80	2.35	0.25	1.65	2.35	0.55	2.85	0.55	0.95
4	D34	Kusunda	3.30	2.00	2.80	2.95	4.75	2.10	2.40	2.55	0.60	2.80	0.45	0.70
5	D47	Parastanr	9.45	3.41	5.45	5.83	4.55	1.90	4.35	4.20	3.55	5.33	2.55	3.65
6	D55	Hariladih	9.42	3.88	8.60	8.62	8.42	2.97	5.47	8.62	4.42	8.42	1.57	4.02
7	D80	Bastacolla	4.30	2.08	4.90	5.00	5.00	2.30	3.05	3.80	4.35	9.35	3.28	4.20
<b>Average WL (bgl)</b>			5.56	1.85	3.71	4.05	4.23	1.68	2.85	3.59	2.33	4.87	1.54	2.50

### LAST THREE-YEAR ASSESSMENT:

Pre-monsoon GW Level (m): Min – 1.75 m      Max – 9.45 m  
 Post-monsoon GW Level (m): Min – 0.70 m      Max – 8.60 m

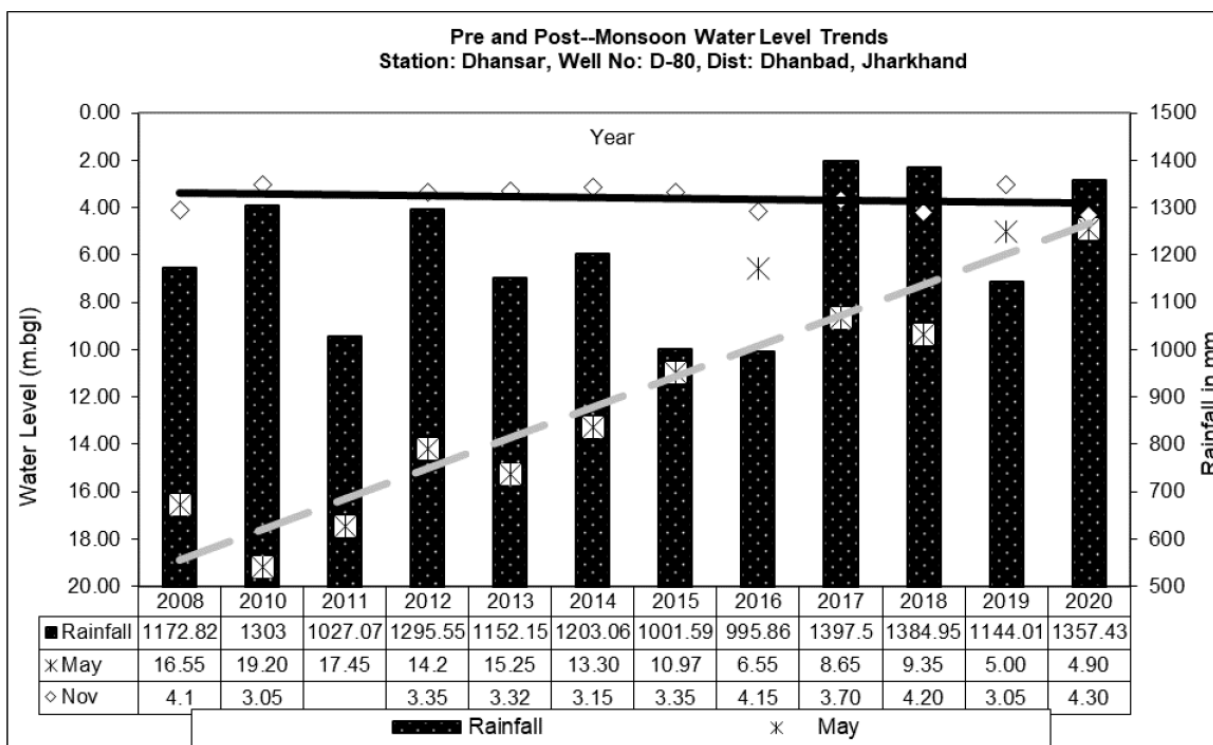
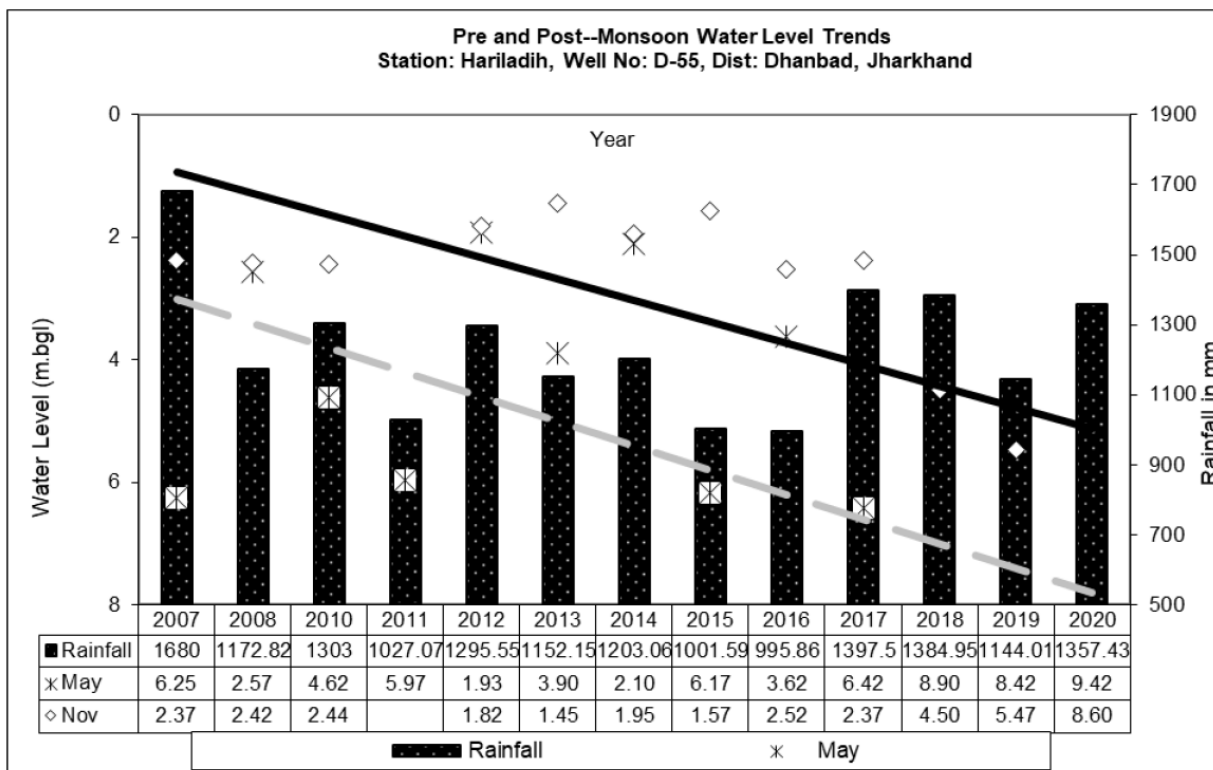
**Table-8B: Cluster wise Groundwater development scenario**


Cluster/ Area	Adminis- trative Blocks/Stage Of GW Extraction	Total Water demand (cum/day)				Avg. GW level (bgl in m) 2020		GW level declining trend 2005-2020		Remarks
		Mine Discharge + BH pumping	Surface Water Source	Total Use (Domestic + Industrial)	Excess Or other use	Pre- monsoon	Post- monsoon	Pre- monsoon	Post- monsoon	
Cluster-I	Bermo (SOD: Over- exploited)	2173 (2065+108)	NIL	2112 (1698+414)	61	5.46	2.69	YES	YES	Recharge structure needed
Cluster-II	Baghmara  (SOD: Critical)	8350	Jamunia river	6737 (2755+3982)	1613	5.83	2.17	NO	NO	Excess mine water needed to be utilized
Cluster-III		12760 (10960+1800)	NIL	8946 (7849+1097)	3814	4.91	1.96	NO	NO	
Cluster-IV		5900	MADA	5100 (3605+1495)	800	5.52	2.25	NO	NO	
Cluster-V		12690 (11025+1665)	MADA	11063 (5710+5353)	1897	4.18	1.67	YES	YES	
Cluster-VI	Dhanbad	4150	MADA	4150 (1664+2486)	0.0	7.50	3.49	YES	NO	--
Cluster-VII	(SOD: Over- exploited)	21565	MADA	20826 (17596+3230)	739	5.56	3.71	YES	YES	Excess mine water needed to be utilized water
Cluster-VIII	Jharia  (SOD: Over- exploited)	9320	MADA	5294 (3730+1564)	4026	6.03	3.16	NO	NO	
Cluster-IX		12980	MADA	9358 (4549+4809)	3622	5.81	4.28	NO	NO	
Cluster-X		11825	Damodar river	6201 (4255+1946)	5624	5.69	3.29	YES	NO	
Cluster-XI	Dhanbad (SOD: Over- exploited)	24960	MADA & DVC	19425 (14015+5410)	5535	3.40	1.91	NO	NO	--
Cluster-XIII	Baghmara  (SOD: Critical)	4815	Damodar river	4815 (4679+136)	0.0	6.80	3.22	NO	NO	
Cluster-XIV		2600	NA	2550 (2412+138)	50	5.42	3.08	NO	NO	
Cluster-XV		6200	NA	5941 (4600+1341)	259	3.83	2.63	NO	NO	
Cluster-XVI	Nirsa (SOD: Safe)	1910	DVC (Barakar river)	1730 (1380+350)	180	3.18	3.13	NO	NO	--

MADA – Mineral Area Development Authority, Jharkhand, Dhanbad (payment basis).

DVC – Damodar Valley Corporation, Maithon/Panchet, Jharkhand (payment basis).

## HYDROGRAPHS OF CLUSTER-VII



	<b>भारत कोकिंग कोल लिमिटेड</b> 'एक मिनीरल कम्पनी' (कोल इण्डिया लिमिटेड का एक अंग)	
<b>पर्यावरण विभाग, कोयला भवन</b>		
सभी संबंधित व्यक्तियों को सूचित किया जाता है कि भारत कोकिंग कोल लिमिटेड के क्लस्टर VII कोयला खनन परियोजना को पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय के द्वारा पर्यावरणीय स्वीकृति में संशोधन दिया गया है जो इस प्रकार है :-		
क्रम संख्या	परियोजना का नाम	स्वीकृति पत्र संख्या एवं दिनांक
1.	धनबाद जिला, झारखण्ड में स्थित भारत कोकिंग कोल लिमिटेड के क्लस्टर VII कोयला खनन परियोजना की पर्यावरण स्वीकृति जिसका कुल क्षेत्र 2127.70 हेक्टेयर है एवं उत्पादन क्षमता 11.42 मिलियन टन प्रति वर्ष है को संशोधित किया गया है जिसमें राजापुर/द-झरिया ओसीपी परियोजना की पीक उत्पादन क्षमता 2.56 एमटीपीए की गयी है पर क्लस्टर VII की उत्पादन क्षमता 11.42 मिलियन टन प्रति वर्ष यथावत है।	J-11015/238/ 2010-IA-II (M) Pt. दिनांक 20 अगस्त 2020
पर्यावरणीय स्वीकृति प्रतिलिपि झारखण्ड राज्य प्रदूषण नियंत्रण बोर्ड के पास उपलब्ध है तथा इसे पर्यावरण एवं वन मंत्रालय की अधिकारिक वेबसाईट <a href="http://envfor.nic.in">http://envfor.nic.in</a> और भारत कोकिंग कोल लिमिटेड के आधिकारिक वेबसाईट <a href="http://www.bcclweb.in">http://www.bcclweb.in</a> पर देखा जा सकता है।		
हो/- विभागाध्यक्ष (पर्यावरण), कोयला भवन		





**Picture 1 – Covered Transportation**



**Picture 2 – Water Sprinkling on Transportation Road**





**Picture 3 – Manual Sweeping of Public Road**

Government of India  
Ministry of Jal Shakti  
Department of Water Resources, River Development and Ganga Rejuvenation  
Central Ground Water Authority (CGWA)  
Application for Issue of NOC to Abstract Ground Water (NOCAP)

**Application for Permission to Dewater Ground Water for Mining Industry  
(Application for New NOC)**

Application Number : 21-4/274/JH/MIN/2018

<b>1. General Information:</b>	
Water Quality:	Fresh Water
Whether Ground Water Utilization for:	Existing Industry
Date of Commencement Mine/Project:	01/01/1972
Date of Expansion:	
Application Type Category/ Type of Application	Coal
<b>2. Name of Mine/Project:</b>	CLUSTER VII GROUP OF MINES OF BCCL
<b>3. Location Details of the Mining Unit- (Attach Site, Approved Mining Plan) (\$) :</b>	
Address Line 1 :	OFFICE OF THE GENERAL MANAGER
Address Line 2 :	KUSUNDA AREA
Address Line 3 :	BCCL
State:	JHARKHAND
District:	DHANBAD
Sub-District:	DHANBAD
Village/Town:	Dhanbad (M Corp.)
Latitude:	

**Picture 4 – Ground Water Application Cluster VII**



**Picture 5 – Training at Vocational Training Centre**



**Picture 6 – Spreading Seed Ball on OB Dumps**





**Picture 7 – Enclosed Coal Handling Plant**



**Picture 8 – Top Soil Stack**





**Picture 9 – Green Belt Development along Railway Siding**



**Picture 10 – Oil & Grease Trap**





Picture 11 – Grassing on active OB Dumps

	<p><b>भारतकोकिंगकोललिमिटेड</b> (कोलइंडियालिमिटेडकाएकअंग) <b>BHARAT COKING COAL LIMITED</b> (A Subsidiary of Coal India Limited)</p>
<p>Civil Engineering Department, Koyla Nagar, Dhanbad – 826 005 (JH), India. e-mail: <a href="mailto:gmcivil.bccl@coalindia.in">gmcivil.bccl@coalindia.in</a></p>	
<p>NIT Ref. No.: BCCL/CED/TC/eNIT-18/2020-21/968</p>	<p>Date: 10.03.2021</p>
<p><b><u>E – Tender Notice</u></b></p>	
<p><b>Open E-Tender invited vide BCCL/CED/TC/eNIT-18/2020-21/968; Date: 10.03.2021 for the work of “<u>Drilling and installation of 23 nos of piezometric wells in the command area of BCCL</u>”</b></p>	
<p><b>Estimated Value: Rs. 2,16,19,913.33</b></p>	<p><b>Period of Work: 175 days</b></p>
<p>The tender documents can be downloaded from <b>11.03.2021 to 29.03.2021</b>. All prospective bidders are advised to visit website <a href="https://coalindiatenders.nic.in">https://coalindiatenders.nic.in</a> for further details and to participate against this tender. Full details of this tender are also available on website “<a href="http://eprocure.gov.in">eprocure.gov.in</a>”.</p>	
<p>Copy to:- 1) D (T) OP/D(P)/CVO, BCCL 2) GM (Civil/Ind.), BCCL. 3) GM All Area. 4) Chief Manager (Civil), CED HQ, BCCL. 5) GM (Geology)/HOD (Environment)/GM (P&amp;P). 6) Area Manager (Civil), All Area 7) Assistant Manager (Civil), TC, CED. 8) IEM.</p>	<p style="text-align: right;">   <b>GM (Civil/Welfare), BCCL</b>          ..... for kind information       </p>

Picture 12 – Tendering for Piezometer





Picture 13 – Skill training to PAPs