

भारत कोकिंग कोल लिमिटेड

एक मिनी रत्न कम्पनी
(महारात्न कम्पनी कोल इंडिया का एक उपक्रम)
पंजीकृत कार्यालय कोयला भवन, कोयला नगर,
धनबाद-826005
सीआइएन : U10101JH1972GOI000918



Bharat Coking Coal Limited

A Mini Ratna Company
(A Subsidiary of Coal India Limited: A Maharatna Company)
Regd. Off. : Koyla Bhawan, Koyla Nagar
Dhanbad - 826005
CIN : U10101JH1972GOI000918

OFFICE OF THE GENERAL MANAGER WESTERN JHARIA AREA

पश्चिमी झरिया क्षेत्र
पो. मुनीडीह, जिला: धनबाद (झारखण्ड)-826129
फोन नं. 0326 2273483; फेक्स: 0326 2273445, ई-मेल: gmwj.bcci@coalindia.in

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Ref: BCCL/WJA/ENV/2021/109

Date: 29/11/2021

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

Sub:- Submission of six-monthly reports on compliance of Environment Clearance for the period from **April'2021 to Sept'2021** with respect to **Cluster-XII** of Kapuria UG project, M/s Bharat Coking coal Limited.

Ref: EC Order No. – J-11015/184/2012-IA.II (M) Dated:- 10.12.2014.

Dear Sir,

Please find enclosed herewith the six-monthly reports on compliance of Environment Clearance for the period from **April'2021 to Sept'2021** in respect of **Cluster XII of Kapuria UG of M/s Bharat Coking Coal Limited** for your kind perusal and further needful action please. It is also to bring to your kind notice that the project has been delayed due to the delay in physical possession of land.

Thanking you,

Encl:- As Above

Yours faithfully,

Project Officer
Kapuria Project

CC to:-

1. The Director, 1A Monitoring Cell, Paryavaran Bhawan, CGO Complex, New Delhi – 110003.
2. The Member Secretary, Jharkhand State Pollution Control Board, TA – Division Building, Dhruwa-Ranchi – 834004.
3. HoD (Env.), BCCL, Koyla Bhawan Dhanbad.
4. GM, W.J. Area.
5. Nodal Officer (Env.), WJ Area.

"Copy for uploading on MOEF&CC "parivesh portal" and send e-mail"

**ENVIRONMENTAL CLEARANCE COMPLIANCE OF CLUSTER-XII
GRANTED VIDE LETTER NO. J-11015/184/2012-IA.II (M) DATED
10.12.2014**

(April' 21 – Sept'21)

Sl. No	A. Specific Conditions by MOEF:	Compliance
i.	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC	Land of Shaft sinking had been acquired and the construction of boundary wall is completed at the site. Work of Shaft sinking was started by the contractor but it had to be stopped after 2 month due to local villagers protest. The condition of maximum production as per prescribed in the EC shall be complied as the production starts.
ii	A separate team for subsidence monitoring and surface mitigation measures be constituted and continuous monitoring and mitigation measures be carried out.	Shall be complied. Project is under construction phase.
iii.	The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.	Agreed.
iv.	The coal transportation from the mine to the siding shall be by conveyor belt and coal transportation from to the washery shall be by rail.	Shall be complied.
v.	Piezometers be installed upto the depth of mining to facilitate monitoring of ground water.	The work of monitoring of ground water is being carried out by CMPDI.
Vi.	Water sprinkler be used for coal dust suppression along the haul roads.	Shall be complied.
vii.	Thick green belt shall be developed around proposed washery within the Cluster-XII lease area and plantation shall be undertaken along NR-32.	Shall be complied.
Viii	Subsidence study shall be taken up with reputed scientific agency as per stipulation of DGMS	Shall be complied.
ix.	Various CSR works that will be carried out shall include education, healthcare water supply etc.	Shall be complied.
x.	The project should have ecologist/social scientists to monitor the project.	BCCL is following the roadmap prepared by FRI, Dehradun to restore ecology in the region and conducting the work of ecological restoration in the mined out areas.
xi.	Coal produced from the mine will be directly loaded into a CHP at the incline top. From the CHP at incline top, coal will be transported to the proposed Kapuria Coal Washery linked to the mine by covered conveyor system of length of 250m. Washed	Shall be complied.

	coal from the washer will be transported by conveyor to the railway siding and loaded into the wagons by CHP.	
xii.	The production shall be within the same Mining Lease area	Shall be complied.
xiii.	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clay soilsuitable material.	Shall be complied.
xiv.	If subsidence is found exceeding the permitted limits, then the land owners shall be adequately compensated with mutual agreement of the landowners.	Shall be complied.
xv.	Mining shall be carried out as per statuette at a safe distance from river/nalla following within adjacent to the lease boundary at the time of depillaring, protective bunds and garland drains shall be provided so that no water from the surface enters the subsidence area and the shaft.	Mining shall be done as per DGMS statute.
xvi.	Sufficient coal pillars shall be left unextracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.	Shall be complied.
xvii.	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.	Shall be complied.
xviii.	Diversion of Land shall be done with approval of the Competent Authorities.	Shall be complied.
xix.	Coal Extraction shall be optimised in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No depillaring & coal extraction should be carried out below habitation, H.T. Lines & beneath road,	It will be done as per the statute and DGMS Guidelines.

	water bodies, railway track.	
xx.	The mined out land should be used for agriculture purpose.	Shall be complied
xxi.	Safety measures and health issues need to be addressed for workers and surrounding villagers.	Shall be complied.
xxii.	Proponent shall implement all the lated safety measures with safety equipment.	It will be done as per the statute and DGMS Guidelines.
xxiii.	At the time of establishing the CHP, it is proposed to establish mist spray arrangements and also enclosing the ground level bunkers up to the level of gantry	Shall be complied.
Xxiv.	An afforestation plan to be prepared for implementation after stabilization of subsidence	Shall be complied.
Xxv.	Water spraying arrangements at loading points and mist spray arrangements are to be provided.	Shall be complied.
xxvi.	No additional land, manpower and equipment and water shall be used for the expansion project.	Shall be complied.
xxvii.	Mine closures activities include sealing of incline mouth dismantling of haulage system, clearing and afforestation of coal stock area, plantation on barren land and old abandoned mine.	Mine closure plan will be formulated as per the guidelines of ministry of coal GoI.
xxviii.	3-tier plantation should be developed 2 km stretch of road from the mine using native species	complied.
.xxix.	Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.	It will be done as per EMP.

Xxx.	Water sprinkling system shall be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc. Major approach roads shall be black topped and properly maintained.	complied.
.Xxxi.	A progressive afforestation plan shall be prepared and implemented over the mine lease area acquired and shall include areas under green belt development, areas along roads, infrastructure, along ML boundary and township etc., by planting native species in consultation with the local DFO/Agriculture Department,	Shall be done. EMP and mine closure plan will be followed.
xxxii.	Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers, The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment, Forests & Climate Change and to the Central Pollution Control Board quarterly within one month of monitoring.	It will be complied. At present CMPDI is working to establish a network of piezometer well.
xxxiii.	Acid Water Treatment Plant, volume of water to be treated and disposal of brine should be provided.	Shall be provided if acid water treatment is required.
xxxiv.	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	Shall be provided.
xxxv.	Monitoring of drinking water should be carried out regularly.	Environmental parameters are being monitored by CMPDI, as per the MoEF&CC standards.
Xxxvi.	Sewage treatment plant shall be installed in the township. ETP shall also be provided for treating workshop	Shall be complied.
xxxvii.	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1:5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for anyone particular season which is consistent in the time series), and the report submitted to MOEF&CC and its Regional office at Bangalore.	Presently a time series map of vegetation cover in the Jharia coal field is being carried out through CMPDIRanchi using satellite imagery for every 3 years and is being uploaded on the official website of company. Further CMPDI has been requested to prepare time series of land use maps based on satellite imagery of the core zone and buffer zone in the scale 1:5000.

xxxviii	If the water quality parameters such as F, pH, heavy metals, etc. exceed the prescribed limits, suitable measures by the proponent be taken to ensure that the local communities are provided alternate source of water for their livelihood	Shall be complied.
xxxix	Medical camps should be organized in the area for regular check-up of workers/villagers/population. Detailed prevalent disease pattern in the area should be documented and details of medical facilities provided for the same be made available to the MoEF&CC	It is being done.
xl.	Mine discharge water outside the ML shall be monitored, particularly for TDS and treated to conform to prescribed levels before discharge into the natural environment.	Environmental parameters are being monitored by CMPDI, as per the MoEF&CC standard.
xli.	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource, in case water table shows a declining trend. The project authorities shall meet water requirement of nearby villagers) in case the village wells go dry due to dewatering of mine.	It will be provided and regular monitoring shall be done
xlii.	Besides carrying out regular periodic health check-up of their workers, 10% 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, through an agency such as NIOH, Ahmadabad within a period of one year and the results reported to this Ministry and to DGMS.	It will be complied, however BCCL has engaged NIOH for other cluster of BCCL to health checkup for occupational disease and hearing impairment.
xlili.	The mining in the existing mines should be phased out after expiry of the current mining lease and after reclamation of mined over area. The operating mines may be analysed and monitored for compliance of conditions, bearing with movement of wildlife and until such time they are closed/phased out.	Agree, Shall be complied
xliv.	Project specific CSR for an amount of Rs5/Tonne of coal production, as adjusted as per the annual inflation, should be provided for the CSR activities undertaken and the progress made thereon shall be uploaded annually on the company website. Monitoring of the impacts of activities under CSR shall be carried out periodically.	It will be done as per the CSR policy of organization.

xliv.	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forests & Climate Change 5 years in advance of final mine closure for approval.	shall be complied
xlvi.	Corporate Environment Responsibility: a) The Company shall have a well laid down Environment Policy approved by the Board of Directors. b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions. c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished. d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.	Bharat Coking Coal Ltd is a subsidiary of Coal India Ltd which is having a well laid down Environmental Policy It is being complied It already exists within the company. It will be done, if any.
Sl. No	B. General Conditions Conditions by MOEF:	Compliance
i.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change.	Shall be complied
ii.	No change in the calendar plan of production for quantum of mineral coal shall be made.	Shall be complied when coal production will start.
iii.	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM2.5, SO2 and NOx monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months,	Being complied. Monitoring is being done by CMPDI. Monitoring report enclosed.

iv.	Data on ambient air quality (PM₁₀, PM 2.5, SO₂ and NO_x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the EPA rules, 1986 shall be furnished as part of compliance report.	Being complied
v.	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	Shall be complied
vi.	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	Shall be complied
vii.	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	Shall be complied
viii.	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EPA Rules, 1986.	Environmental parameters are being monitored as per NAAQS standards. Monitoring stations have been finalized with Jharkhand State Pollution Control Board, Ranchi.
ix.	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	Shall be complied

x.	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.	Shall be complied
xi.	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.	A full-fledged environment department headed by HoD (Environment) along with a suitable qualified multidisciplinary team with of executive has been established in the headquarters. They are trained in ecological restoration, sustainable development, rainwater harvesting methods etc.
xii.	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.	Shall be complied
xiii.	http://envfor.nic.in. The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the Ministry of Environment, Forests & Climate Change at http://envfor.nic.in.	It is complied
xiv.	A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.	It is complied
xv.	A copy of the environmental clearance letter shall be shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar's Office for 30 days	It is complied

xvi.	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PMIQ, PM_{2.5}, SO₂ and NO_x (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.	It is being complied The monitoring data of environment parameters to be display at project premises shall be complied once the project starts.
xvii.	The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB.	It is being complied
xviii.	The Regional Office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the officers) of the Regional Office by furnishing the requisite data information/monitoring reports,	It is being complied
xix.	The Environmental statement for each financial year ending 31 March in For -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 MoEFCC by e-mail.	It is being complied

	C. Other Conditions by MoEF&CC	
4	The proponent shall abide by all the commitments and recommendations made in the ETA/EMP report so along during their presentation to the EAC.	Agreed
5	The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent	Shall be implemented
6	The proponent is required to obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection	Agreed
7	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Agreed
8	The Proponent shall setup an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.	It will be done
9	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Land of Shaft sinking had been acquired and the construction of boundary wall is completed at the site. Work of Shaft sinking was started by the contractor but it had to be stopped after 2 month due to local villagers protest. Agreed
10	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. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil	Shall be complied

	contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.	
11	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Agreed


 29/11/21
 Project officer
 Kapuria Mine


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

ENVIRONMENTAL MONITORING REPORT OF BHARAT COKING COAL LIMITED, CLUSTER – XII

(FOR THE MONTH APRIL, 2021)

E. C. no. J-11015/184/2012-IA.II (M) dated 10.12.2014.



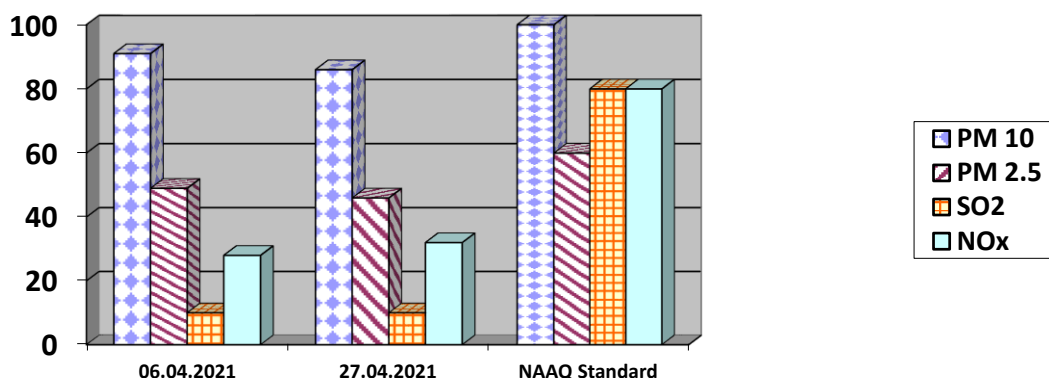
CMPDI

ISO 9001 Company
Regional Institute-II
Dhanbad, Jharkhand

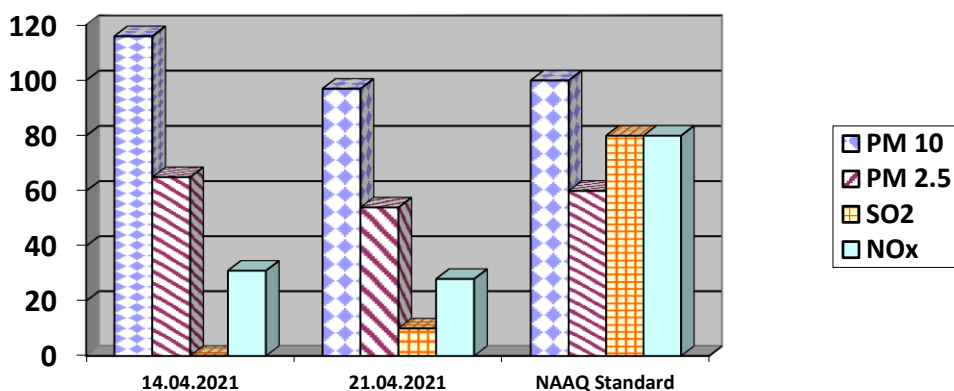
AMBIENT AIR QUALITY DATA

Cluster–XII, Bharat Coking Coal limited
Month: APRIL 2021
Year : 2021-22.

Station Name: A18, Rudhi Basti		Zone: Core		Category: Residential	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	06.04.2021	91	49	10	28
2	27.04.2021	86	46	10	32
	NAAQ Standard	100	60	80	80



Station Name: A6, Block IV		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	14.04.2021	116	65	<10	31
2	21.04.2021	97	54	10	28
	NAAQ Standard	100	60	80	80

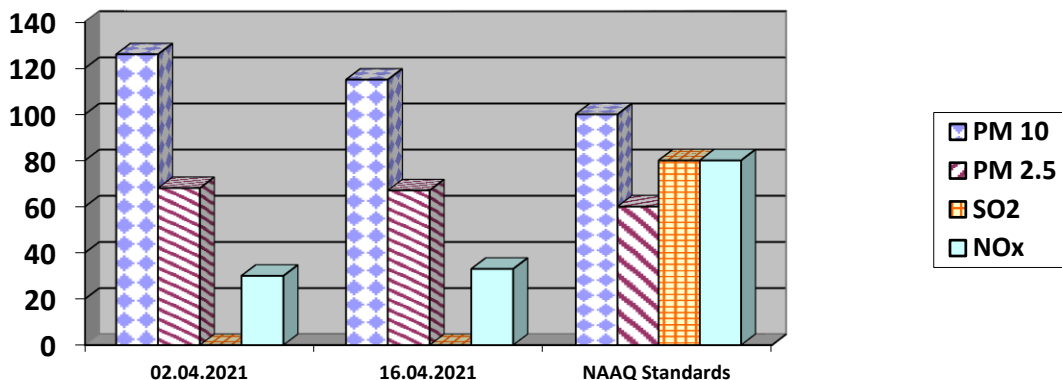



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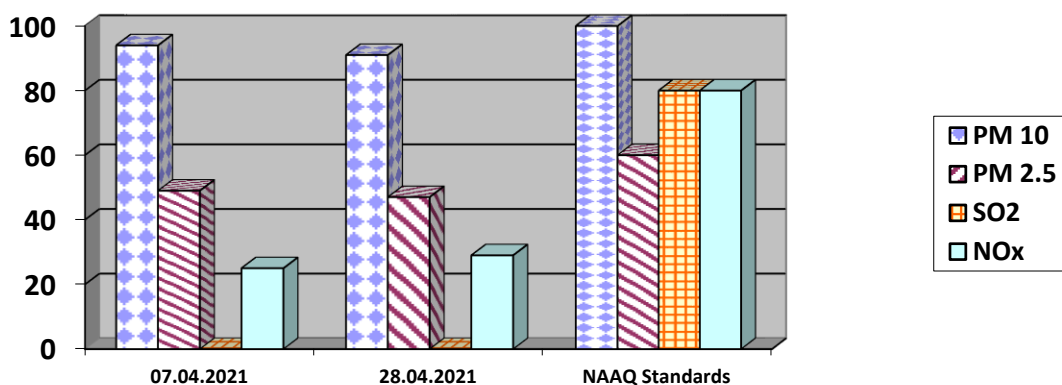

 Checked By
 Lab In Charge
 RI-2, CMPDI, Dhanbad


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

Station Name: A17 Moonidih UGP		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	02.04.2021	126	68	<10	30
2	16.04.2021	115	67	<10	33
	NAAQ Standards	100	60	80	80



Station Name: A19 – Murlidih 20/21		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	07.04.2021	94	49	<10	25
2	28.04.2021	91	47	<10	29
	NAAQ Standards	100	60	80	80



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

सुमान रुद्र राय
Analysed By
JSA/SA/SSA

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

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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) Rudhi basti (N18)
- ii) Block IV(N6)
- iii) Moonidih UGP(N17)
- iv) Murlidih 20/21 (N19)

4.2 Methodology of sampling and analysis

Noise level measurements in form of 'L_{EQ}' were taken using Integrated Data Logging Sound Level Meter (NL-52 OF RION CO. Ltd. Make) during day time. Noise levels were measured for about one hour 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 MoEFCC. 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_{EQ} 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 -XII			Month: APRIL 2021		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Moonidih UGP (N17)	Industrial area	02.04.2021	61.3	75
2	Moonidih UGP	Industrial area	16.04.2021	59.6	75
3	Rudhi Basti (N18)	Residential area	06.04.2021	52.8	55
4	Rudhi Basti	Residential area	27.04.2021	53.9	55
5	Murlidih 20/21(N19)	Industrial area	07.04.2021	60.4	75
6	Murlidih 20/21(N19)	Industrial area	28.04.2021	60.8	75
7	Block IV (N6)	Industrial area	14.04.2021	60.1	75
8	Block IV	Industrial area	21.04.2021	58.2	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,*

अमान रुद्र रावुल

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

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ENVIRONMENTAL MONITORING REPORT OF BHARAT COKING COAL LIMITED, CLUSTER – XII

(FOR THE MONTH MAY, 2021)

E. C. no. J-11015/184/2012-IA.II (M) dated 10.12.2014.



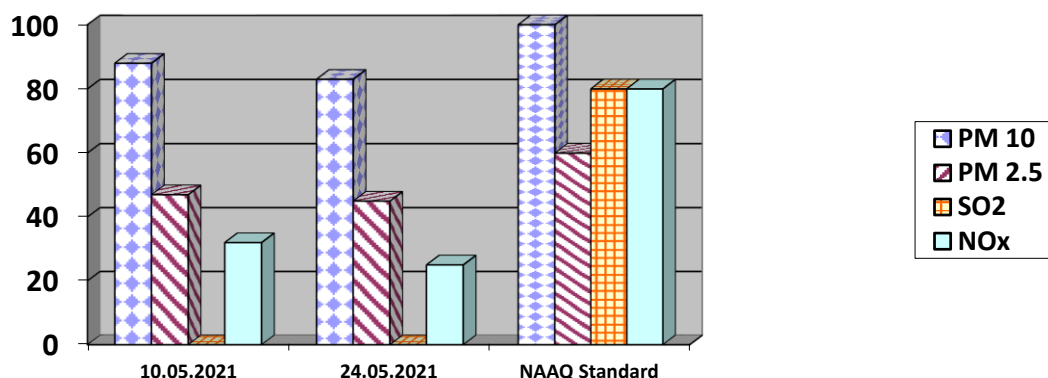
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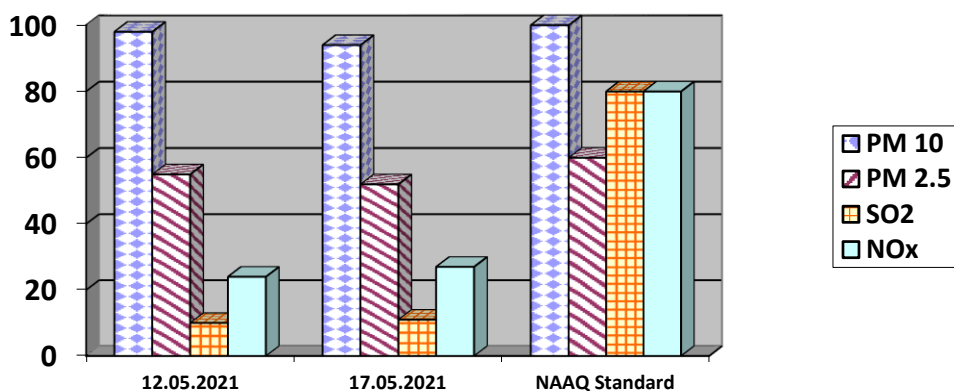
AMBIENT AIR QUALITY DATA

Cluster–XII, Bharat Coking Coal limited
Month: MAY 2021
Year : 2021-22.

Station Name: A18, Rudhi Basti		Zone: Core		Category: Residential	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	10.05.2021	88	47	<10	32
2	24.05.2021	83	45	<10	25
	NAAQ Standard	100	60	80	80



Station Name: A6, Block IV		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	12.05.2021	98	55	10	24
2	17.05.2021	94	52	11	27
	NAAQ Standard	100	60	80	80

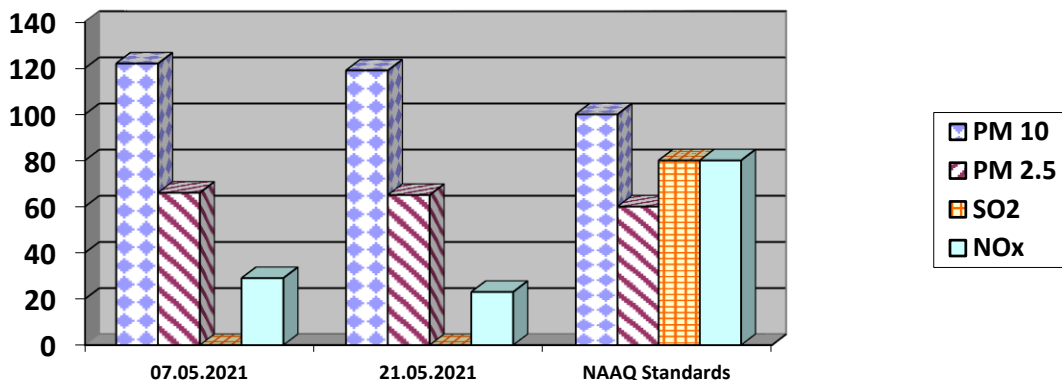



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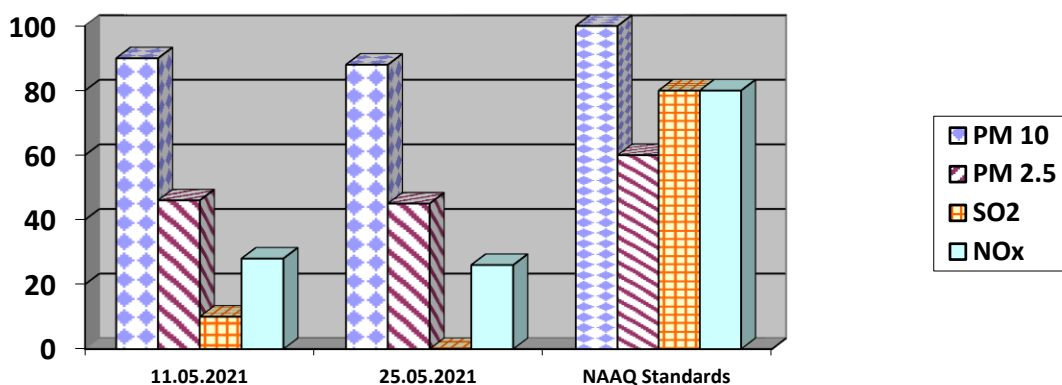

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 HOD(In-charge) Environment
 RI-2, CMPDI, Dhanbad

Station Name: A17 Moonidih UGP		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	07.05.2021	122	66	<10	29
2	21.05.2021	119	65	<10	23
	NAAQ Standards	100	60	80	80



Station Name: A19 – Murlidih 20/21		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	11.05.2021	90	46	10	28
2	25.05.2021	88	45	<10	26
	NAAQ Standards	100	60	80	80



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

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NOISE LEVEL QUALITY MONITORING

4.1 Location of sampling sites

- i) Rudhi basti (N18)
- ii) Block IV(N6)
- iii) Moonidih UGP(N17)
- iv) Murlidih 20/21 (N19)

4.2 Methodology of sampling and analysis

Noise level measurements in form of 'L_{EQ}' were taken using Integrated Data Logging Sound Level Meter (NL-52 OF RION CO. Ltd. Make) during day time. Noise levels were measured for about one hour 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 MoEFCC. 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_{EQ} 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 -XII			Month: MAY 2021		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Moonidih UGP (N17)	Industrial area	07.05.2021	62.5	75
2	Moonidih UGP	Industrial area	21.05.2021	54.4	75
3	Rudhi Basti (N18)	Residential area	10.05.2021	51.6	55
4	Rudhi Basti	Residential area	24.05.2021	52.5	55
5	Murlidih 20/21(N19)	Industrial area	11.05.2021	63.3	75
6	Murlidih 20/21(N19)	Industrial area	25.05.2021	62.2	75
7	Block IV (N6)	Industrial area	12.05.2021	58.5	75
8	Block IV	Industrial area	17.05.2021	58.5	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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ENVIRONMENTAL MONITORING REPORT OF BHARAT COKING COAL LIMITED, CLUSTER – XII

(FOR THE MONTH JULY, 2021)

E. C. no. J-11015/184/2012-IA.II (M) dated 10.12.2014.



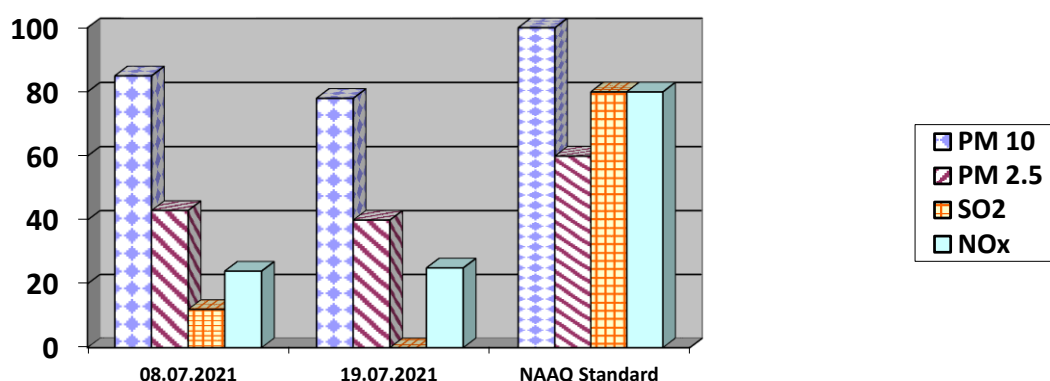
CMPDI

ISO 9001 Company
Regional Institute-II
Dhanbad, Jharkhand

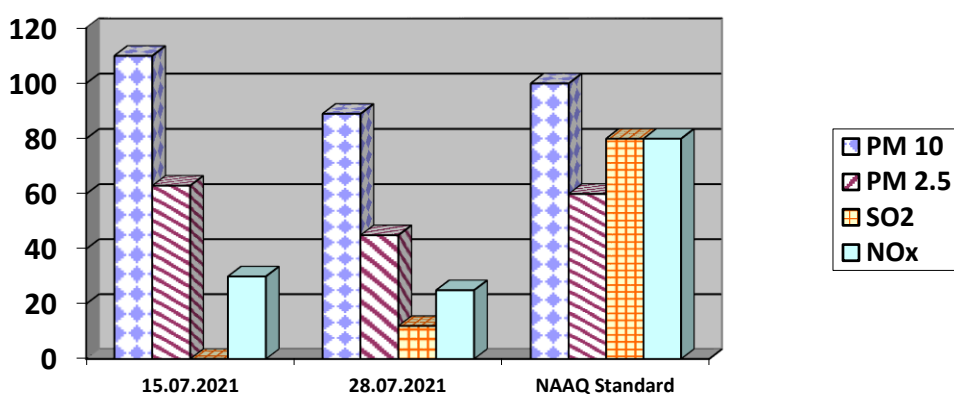
AMBIENT AIR QUALITY DATA

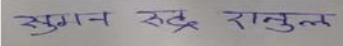
Cluster–XII, Bharat Coking Coal limited
Month: JULY 2021
Year : 2021-22.

Station Name: A18, Rudhi Basti		Zone: Core		Category: Residential	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	08.07.2021	85	43	12	24
2	19.07.2021	78	40	<10	25
	NAAQ Standard	100	60	80	80



Station Name: A6, Block IV		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	15.07.2021	110	63	<10	30
2	28.07.2021	89	45	12	25
	NAAQ Standard	100	60	80	80

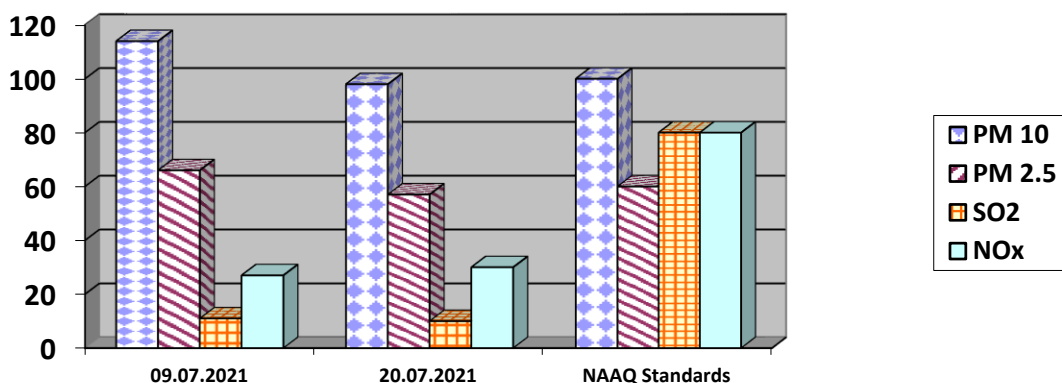



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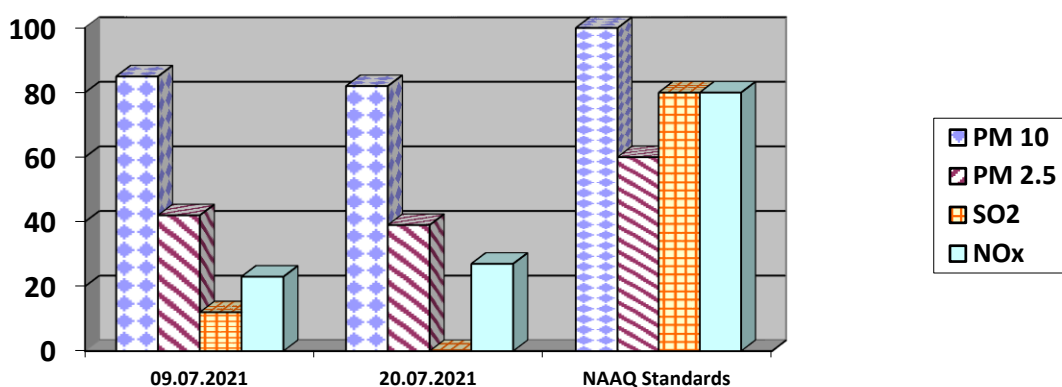

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Station Name: A17 Moonidih UGP		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO2	NOx
1	09.07.2021	114	66	11	27
2	20.07.2021	98	57	10	30
	NAAQ Standards	100	60	80	80



Station Name: A19 – Murlidih 20/21		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO2	NOx
1	09.07.2021	85	42	12	23
2	20.07.2021	82	39	<10	27
	NAAQ Standards	100	60	80	80



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

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NOISE LEVEL QUALITY MONITORING

4.1 Location of sampling sites

- i) Rudhi basti (N18)
- ii) Block IV(N6)
- iii) Moonidih UGP(N17)
- iv) Murlidih 20/21 (N19)

4.2 Methodology of sampling and analysis

Noise level measurements in form of 'L_{EQ}' were taken using Integrated Data Logging Sound Level Meter (NL-52 OF RION CO. Ltd. Make) during day time. Noise levels were measured for about one hour 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 MoEFCC. 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_{EQ} 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 -XII			Month: JULY 2021		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Moonidih UGP (N17)	Industrial area	09.07.2021	56.8	75
2	Moonidih UGP	Industrial area	20.07.2021	56.8	75
3	Rudhi Basti (N18)	Residential area	08.07.2021	52.3	55
4	Rudhi Basti	Residential area	19.07.2021	53.2	55
5	Murlidih 20/21(N19)	Industrial area	09.07.2021	61.2	75
6	Murlidih 20/21(N19)	Industrial area	20.07.2021	62.5	75
7	Block IV (N6)	Industrial area	15.07.2021	57.3	75
8	Block IV	Industrial area	28.07.2021	58.1	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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ENVIRONMENTAL MONITORING REPORT OF BHARAT COKING COAL LIMITED, CLUSTER – XII

(FOR THE MONTH AUGUST, 2021)

E. C. no. J-11015/184/2012-IA.II (M) dated 10.12.2014.



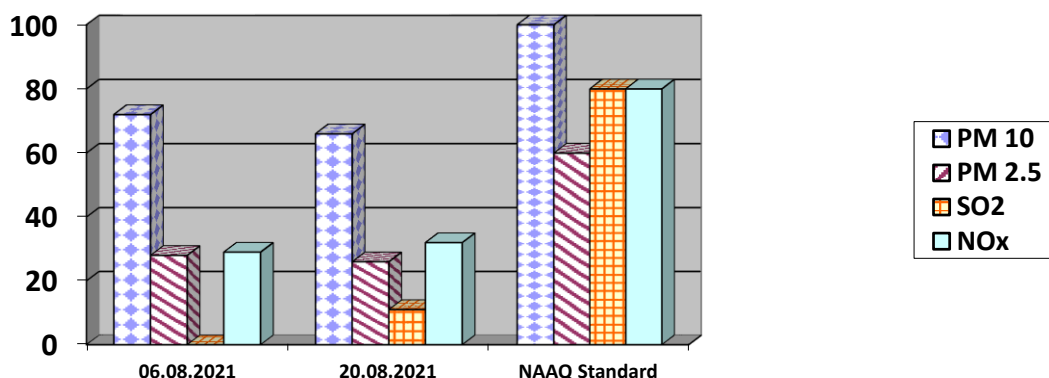
CMPDI

ISO 9001 Company
Regional Institute-II
Dhanbad, Jharkhand

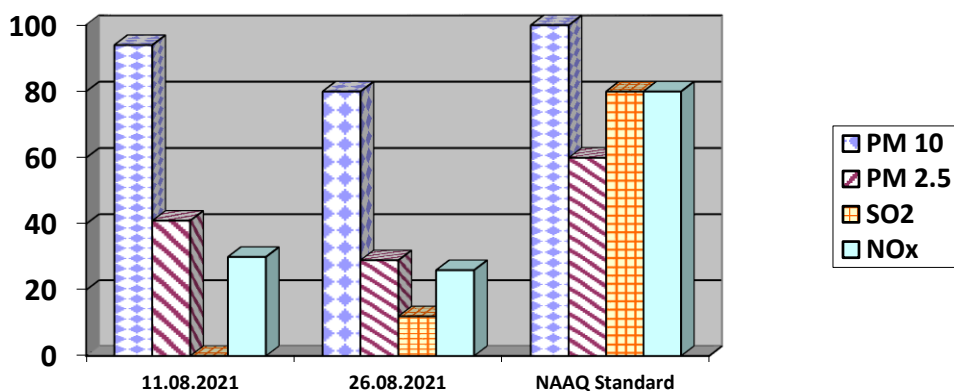
AMBIENT AIR QUALITY DATA

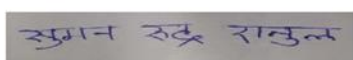
Cluster–XII, Bharat Coking Coal limited Month: **AUGUST 2021** Year : **2021-22.**

Station Name: A18, Rudhi Basti		Zone: Core		Category: Residential	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	06.08.2021	72	28	<10	29
2	20.08.2021	66	26	11	32
	NAAQ Standard	100	60	80	80



Station Name: A6, Block IV		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	11.08.2021	94	41	<10	30
2	26.08.2021	80	29	12	26
	NAAQ Standard	100	60	80	80

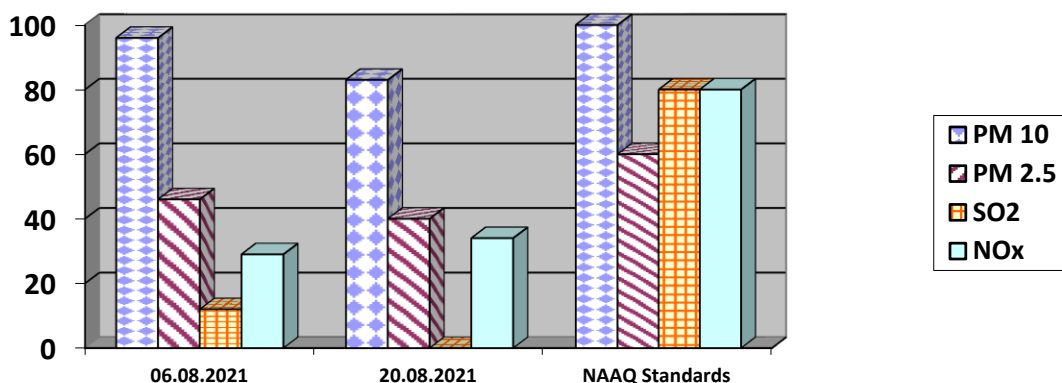



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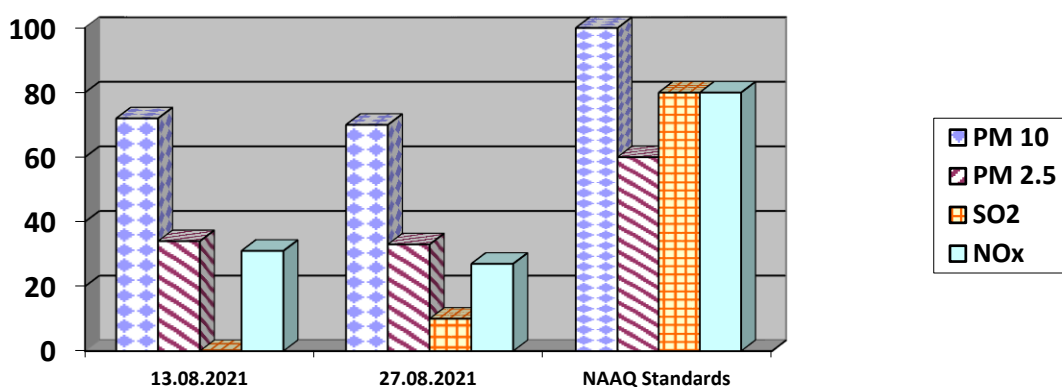

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Station Name: A17 Moonidih UGP		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	06.08.2021	96	46	12	29
2	20.08.2021	83	40	<10	34
	NAAQ Standards	100	60	80	80



Station Name: A19 – Murlidih 20/21		Zone: Buffer		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	13.08.2021	72	34	<10	31
2	27.08.2021	70	33	10	27
	NAAQ Standards	100	60	80	80



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

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NOISE LEVEL QUALITY MONITORING

4.1 Location of sampling sites

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NOISE LEVEL DATA

Name of the Project: Cluster -XII			Month: AUGUST 2021		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Moonidih UGP (N17)	Industrial area	06.08.2021	63.1	75
2	Moonidih UGP	Industrial area	19.08.2021	57.1	75
3	Rudhi Basti (N18)	Residential area	07.08.2021	54.2	55
4	Rudhi Basti	Residential area	19.08.2021	53.9	55
5	Murlidih 20/21(N19)	Industrial area	14.08.2021	53.9	75
6	Murlidih 20/21(N19)	Industrial area	26.08.2021	54.7	75
7	Block IV (N6)	Industrial area	12.08.2021	57.4	75
8	Block IV	Industrial area	24.08.2021	58.5	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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