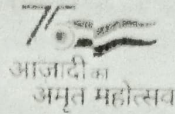
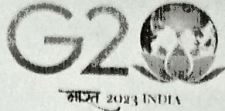




Serving coking coal to the nation



भारत कोकिंग कोल लिमिटेड
(कोल इण्डिया लिमिटेड की एक अनुषंगी कंपनी)
Bharat Coking Coal Limited
(A Subsidiary of Coal India Limited)
(एक मिनिरात्रा कंपनी / A Miniratna Company)
(भारत सरकार का उपक्रम / A Government of India Undertaking)

Ref: BCCL/ NLW PCW/2023-24/ 2208

Date: 30.05.2023

To,
The Director,
IRO, Ranchi, MoEF&CC
Harmu, Jharkhand – 834002

Subject – Six monthly report on Compliance of Environmental Clearance of 5.0 MTPA Patherdih NLW Coal Washery for the period October'22 – March'23.

Ref. – Environmental Clearance Letter no. - J-11015/240/2010-IA.II(M), Dated: 25.01.2012.

Dear Sir,

Please find enclosed herewith the six-monthly report on Compliance of Environmental Clearance for the period October'22 – March'23 in respect of 5.0 MTPA Patherdih NLW Coal Washery. We hope you will find in order.

Thanking You,

Encl: - As above.

Yours faithfully

B. Singh

30.05.2023

Project Officer

5.0 MTPA Patherdih NLW Coal Washery

**PROJECT OFFICER
5.0 MTPA PATHERDIH
NLW WASHERY, PATHERDIH (BCCL)**

Copy To: -

1. The Director, 1A Monitoring Cell, Paryavaran Bhawan, CGO Complex, New Delhi- 110003.
2. The Member Secretary, Jharkhand State Pollution Control Board, TA- Divison Building, Dhurwa, Ranchi – 834004.
3. Scientist & Incharge, Zonal Office, CPCB, 5th Floor 502, House & Conclave, 1582, Rajdanga Main Road, Kolkata- 700107.
4. General Manager (Ws), Washery Division.
5. HoD (Environment), BCCL – KoylaBhawan, Dhanbad.
6. Office Copy.

**ENVIRONMENTAL CLEARANCE COMPLIANCE OF 5.0 MTPA PATHERDIH NLW
COAL WASHERY GRANTED VIDE EC No. J-11015/240/2010-IA.II(M), DATED: 25.01.2012**

(OCTOBER '22 – MARCH '23)

<u>Sl. No.</u>	<u>Compliance Conditions</u>	<u>Compliance Status</u>
(A)	Specific Conditions:	
(i)	The capacity of the washery shall not exceed 6.5 MTPA without prior environment clearance from this Ministry.	Being Complied. Patherdih NLW coal washery will not exceed 6.5 MTPA capacity without prior NOC from MoEF&CC. (Production data of the washery since the beginning of its operation, i.e. , April'2020 is enclosed in ANNEXURE-I).
(ii)	Transport of raw coal from the identified mines of the company, washed coal from the washery to the steel plants in Durgapur, Bhilai and Bokaro and middling to TPPS and coal rejects to FBC based TPP shall be by rail mode only from the railway siding located within the premises.	Being Complied. Patherdih Railway Siding, located within the premises of the Patherdih NLW Coal Washery, is being used for transportation of Washed Coal products.
(iii)	The entire rejects from the washery shall be fully utilized in an FBC based TPP for which open tender for operation of the FBC based TPP has been called by the proponent. The FBC based TPP shall be preferably located in or near Jharia Coalfields. The company shall enter into a long term MOU for utilization of the coal rejects from the washery within 3 months and also for utilization of fly ash generated from the FBC based TPP with a suitable company.	Being Complied. The rejects produced are being stacked separately and its disposal is carried out as per the <i>Policy for Handling & Disposal of Washery Rejects</i> prescribed by the Ministry of Coal, Govt. of India.
(iv)	As the washery is located in Jharia Coalfields, which forms a part of the Critically Polluted Area of Dhanbad, the company shall implement the mitigative measures outlined in the Environmental Action Plan for CPA-Dhanbad applicable to the project, which would be in conformity with the Environmental Action Plan prepared for Dhanbad Area to keep the levels of air quality parameters well within limits. The proponent shall implement mitigative measures such as providing water sprinkling arrangements at various transfer points and loading/unloading points, regular maintenance of vehicles used for coal	Being Complied. This unit is operating as per the guidelines of Environmental Action Plan for CPA- Dhanbad & takes all the mitigative measures to keep air quality parameters well within limit. The unit also arranges for sufficient sprinkling arrangements on roads and all coal transfer points. (Photographs of mobile water sprinkler are enclosed in ANNEXURE-II). Regular maintenance of vehicles is being done to keep minimum source emissions. Three tier green belt with native species is being developed, 1300 saplings have been planted already and plantation drives are also

P. Singh
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5.0 MTPA PATHERDIH
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	transportation, periodic and regular checking of vehicles for source emission, main approach roads used for transportation of raw coal to be black topped, monitoring for particulate matter (PM ₁₀ and PM _{2.5}) and maintenance of records thereof, bag filter at suitable locations of the washery, wind shelters/wind breaks in coal stockyards (raw coal, clean coal and coal rejects), providing 3-tier green belt with native species.	carried out at regular intervals. (<i>Photographs of plantation are enclosed in ANNEXURE-III</i>).
(v)	The proponent shall implement a plan to regularly dredge River Damodar 0.5 km upstream and 1 km length downstream of the washery free of sludge, coal fines and silt which has accumulated in the river over a period of time and dispose the wastes in an environmentally friendly manner, in consultation with the Jharkhand State Pollution Control Board.	Not Applicable. As the Patherdih NLW Coal Washery Unit is nearly 3.5 KM away from Damodar River and no effluent/ drainage from this unit will meet to Damodar River. Therefore, no sludge or coal fines deposit and siltation will be caused by the Washery. So, dredging of River Damodar by Patherdih NLW Washery is not called for.
(vi)	The raw coal, washed coal and coal wastes(rejects) shall be stacked properly at earmarked site(s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored raw coal, washed coal and coal wastes don not catch fire.	Being Complied. Raw Coal, Washed Coal and Coal Rejects are being stacked within stockyards fitted with wind breakers/ shields and adequate measures have been taken to ensure that stored Raw Coal, Washed Coal and Coal Rejects don't catch fire. (<i>Photographs of wind barrier installed at Rejects Stockyard are enclosed in ANNEXURE-II</i>).
(vii)	Hoppers of the coal crushing unit and washery unit shall be fitted with high efficiency bag filters and mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.	Being Complied. The unit has installed high efficiency Bag Filters & Water Sprinkling system at all crushing & coal transfer points to control fugitive emissions. (<i>Photographs of bag filter and water sprinkling are enclosed in ANNEXURE-IV</i>).
(viii)	All approach roads should be black topped and all internal roads shall be black topped or concreted. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using local species shall be developed along the main roads and approach roads to the washery.	Being Complied. Black topped roads have been constructed. Presently cleaning of roads is being done manually. Avenue plantation using local species is being developed along the roads and other adequate locations within the washery premises. (<i>Photographs of plantation are enclosed in ANNEXURE-III</i>).
(ix)	The proponent shall maintain proper records of the ash of the ash content of raw (ROM)	Being Complied. Proper records of Ash content of Raw Coal,

B. Singh
PROJECT OFFICER
5.0 MTPA PATHERDIH
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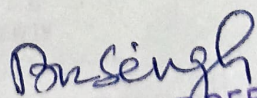
	coal, clean coal and coal rejects of every consignment received and washed and the same shall be uploaded along with quantum of raw coal obtained and washed and dispatched every month on the company's website every month.	Clean Coal and Coal Rejects are being maintained every month and hereby enclosed in ANNEXURE-V .
(x)	Water for the coal washery shall be met from mine water from BCCL mines. No groundwater shall be used for the washery plant operations. Any additional water requirement envisaged shall be obtained by recycle/reuse to the maximum extent and from rain water harvesting measures. Pressure Filter and Thickener shall be installed in the washery for water recovery and reuse.	Being Complied. Water requirement for washery is being met from the nearest mines of BCCL. Additional water requirement has been obtained by recycle/ reuse and from Rain Water Harvesting measures. Construction of infrastructure for Rain Water Harvesting is being undertaken. Also, Thickeners have been installed the washery for water recovery and reuse in washing operations.
(xi)	The Washery unit shall be a zero- discharge facility and no wastewater shall be discharged from the washery into the drains/ natural water courses. The Washery shall be provided with a garland drain to carry/ recycle the effluent generated from the washery operations and coal fines collected- shall be recovered from the slurry and concentrated and also sold for users. The wastewater from the washery shall be free of coal dust and particles and recycled from development and maintenance of green belt and in the plant operations.	Being Complied. As per plan, Washery is operating on Zero-Liquid Discharge concept and no waste water is being discharged from this unit. The washery has been provided with drains (installed with baffles) along the boundary and also, a kutchha catch drain has been constructed along the unloading siding and proposal for the construction of RCC drain with settling tank at same place is under process. (<i>Photographs of drain along the unloading siding and along the boundary are enclosed in ANNEXURE-VI</i>).
(xii)	A separate storm water drain to carry water from the washery for discharge outside the premises to nallas/ streams shall be established. The storm water drains shall be regularly desilted.	Complied. A separate storm water drain installed with baffles has been constructed for discharge of storm water outside the washery premises. Also, a RCC drain with settling tank is being constructed along the unloading siding of the washery. (<i>Photographs of drain along the unloading siding and along the boundary are enclosed in ANNEXURE-VI</i>).
(xiii)	Industrial wastewater (workshop and wastewater from the washery) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed for treatment of workshop effluents.	Being Complied. No effluents are discharged outside from the washery, as the washery operates on Zero-Liquid Discharge principle. Storage tank of Oil and Grease Trap has been constructed; and soon commissioning will be done after completion of ramp construction. (<i>Photographs of Storage tank of Oil and Grease Trap are enclosed in ANNEXURE-VII</i>).

R. Singh.
PROJECT OFFICER
5.0 MTPA PATHERDIH
NLW WASHERY, PATHERDIH (BCCL)

(xiv)	Green belt shall be developed using local species all along the periphery of the site, along the areas such as the crushing unit and stockyard, transfer and loading points.	Being Complied. Development of Green-belt using local species in the periphery of site along the area of crushing unit, transfer and loading point, Stockyard, etc is being taken up. <i>(Photographs of plantation are enclosed in ANNEXURE-III).</i>
(xv)	Socio-economic and welfare measures for the local communities shall be implemented under CSR with an outlay of Rs. 2 crores and Rs. 5/T of coal as recurring expenditure. The village-wise activities undertaken and proposed and the expenditure thereon shall be displayed on the company website every year. A monitoring Cell shall be established for monitoring activities undertaken under CSR.	Being Complied. The Unit has started its commercial operations in July 2020. As per Company's policy, a monitoring Cell of the Company already exists for monitoring activities undertaken under CSR.
(xvi)	Levels of heavy metals such as mercury in raw coal, washed coal and rejects shall be analyzed twice in a year and records maintained thereof and furnished as part of the Compliance Report to the MoEF RO, Bhubaneswar.	Being Complied. Levels of heavy metals in Coal are within limits and are analyzed twice in a year. <i>(Latest report is being enclosed as ANNEXURE-VIII).</i>
(xvii)	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 onto 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.	Being Complied. A well-defined Corporate Environment Policy has already been laid down and approved by the Board of Directors. This is also posted on BCCL website. http://www.bcclweb.in/environment/CEP_04_11.2019.pdf An Environment department at BCCL H.Q. looks after the infringements/ deviation/violation of Environment & Forest norms, environmental issues, and compliances, etc., for all the units running in BCCL. To implement the Corporate Environment Policy, a manual for Environment Personnel is prescribed by CIL : https://www.coalindia.in/media/documents/Guidelines_for_Environmental_Personnel_in_Min_20092016_hAukCHt.pdf which has the proper operating procedures. In addition, status of Environment Management is reported to the BCCL Board every quarter. Monitoring is being done by CMPDIL. CMPDIL has a laboratory accredited by NABL.

Bansingh
PROJECT OFFICER
5.0 MTPA PATHERDIH
NLW WASHERY, PATHERDIH (BCCL)

(B)	General Conditions :	
(i)	No change in technology and scope of working of the washery shall be made without prior approval of the Ministry of Environment and Forests.	Being Complied.
(ii)	Four ambient air quality monitoring stations shall be established in the core zone as well as the buffer zone for monitoring PM ₁₀ , PM _{2.5} , SO ₂ and NO _x . Locations 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, PM ₁₀ , and PM _{2.5} etc. shall be carried out at least once in six months.	Being Complied. Four ambient air monitoring stations for monitoring of PM ₁₀ , PM _{2.5} , SO ₂ and NO _x have been established in the core zone and buffer zone. Also, Routine Environment Monitoring is being carried out fortnightly and monitoring of heavy metals is being carried out every six months by CMPDIL, which has NABL accredited laboratory. (Monitoring Reports are enclosed in ANNEXURE-IX).
(iii)	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 EP Rules, 1986.	Being Complied. Four ambient air monitoring stations for monitoring of PM ₁₀ , PM _{2.5} , SO ₂ and NO _x have been established in the core zone and buffer zone. Presently, CMPDIL Dhanbad is carrying out regular monitoring of environmental quality work. (Monitoring Reports are enclosed in ANNEXURE-IX).
(iv)	Data on ambient air quality (PM ₁₀ , PM _{2.5} , SO ₂ and NO _x and heavy metals such as Hg, As, Ni, Cr, etc.) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the EP Rules, 1986 shall be furnished as part of the compliance report.	Being Complied. Four ambient air monitoring stations for monitoring of PM ₁₀ , PM _{2.5} , SO ₂ and NO _x have been established in the core zone and buffer zone. Also, Routine Environment Monitoring is being carried out fortnightly and monitoring of heavy metals is being carried out every six months by CMPDIL having own laboratory recognized under EPA Rules, 1986. The monitoring reports are sent to the Ministry, its Regional Office, CPCB & JSPCB every six months along with the six-monthly EC Compliance report.
(v)	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc. shall be provided with ear plugs/ muffs.	Being Complied. Monitoring is being done by CMPDIL, which has NABL accredited laboratory. (Monitoring Reports are enclosed in ANNEXURE-IX).
(vi)	Personnel working in dusty area shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	Being Complied. As per Safety Policy of the Company, necessary protective respiratory devices are provided to the workmen working in dusty


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5.0 MTPA PATHERDIH
N/W WASHERY, PATHERDIH (BCC)

	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.	conditions. As per Company's Policy, periodic PME of all the workmen is arranged by the company and corrective measures are taken accordingly.
(vii)	A separate environmental management cell with suitable qualified personnel shall be set up under control of a Senior Executive, who will report directly to the Head of the Company.	Being Complied. A full- fledged Environment Department, headed by a HoD (Environment) along with a suitable qualified multidisciplinary team of executives which includes Environment, Mining, Excavation, Civil, Survey, Electrical & Mechanical, Forestry discipline executives and technicians (4 nos.) has been established in BCCL Headquarters. They are also trained in ecological restoration, sustainable development, rainwater harvesting methods, etc. At the project level, one Executive in each Area has also been nominated as Project Nodal Officer (Environment) and is also entrusted with the responsibility of compliance and observance of the Environmental Acts/ Laws including Environment Protection measures. The activities are monitored on regular basis at Area and at Head \quarter levels. HoD (Environment) at Headquarter level coordinates with all the Areas and reports to the Director (Technical) and in turn he reports to the CMD of the company The team is multidisciplinary and very much motivated under the guidance of company's Director (Technical) and CMD. Further capacity building. Environment Management Cell, which looks after all the matters related to the statutory compliances, has been constituted at the washery.
(viii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be delivered for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office, Bhubaneswar.	Being Complied. Funds for Environment Protection and Environment Compliance related activities are allotted in the Budget every financial year, which are kept separately under Environment Head of the Budget.

P. Singh

PROJECT OFFICER
5.0 MTPA PATHERDIH
NLW WASHERY, PATHERDIH (BCCL)

(ix)	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 & Forest at http://envfor.nic.in .	Complied. The Washery has already advertised the NOC in local newspapers for wide circulation dated: 01.03.2012 in local daily newspapers Prabhat Khabar and Dainik Jagran.
(x)	A copy of the environmental clearance letter shall be marked to concerned Panchayat/ Zila Parishad/ Municipal Corporation or Urban Local Body/ 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 the company's website.	Complied. The copy of Environmental Clearance has already been made available to District Collector, local Zila Parishad, Ward Councilor, Municipal Corporation. A copy of the Environmental Clearance has also been displayed on the Company's website. A copy of the Environmental Clearance duly received by the local Ward Councilor is enclosed as ANNEXURE-X.
(xi)	A copy of the clearance letter shall 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 Centre and Collector's Office/ Tehsildar's Office for 30 days.	Complied. The Environmental Clearance letter has already been forwarded to Jharkhand State Pollution Control Board, Regional Office, District Industry Centre and Collector's Office for doing the needful.
(xii)	The clearance letter 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 the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM ₁₀ , PM _{2.5} , SO ₂ and NO _x (ambient and stack, if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.	Being Complied. The Environmental Clearance letter has been uploaded on the Company's website. Compliance status is also regularly uploaded on the Company's website every six months. Environment Monitoring Report (Air, Water, Noise and Soil) are also displayed on the Company's website. Monitoring data of environmental quality parameters has been displayed at the project office and being updated regularly. (Photograph of the updated display board is enclosed as ANNEXURE-XI).
(xiii)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MoEF, the respective Zonal Offices of	Being Complied.

Pardeep Singh
PROJECT OFFICER
5.0 MTPA PATHERDIH
NLW WASHERY, PATHERDIH (BCCCL)

	CPCB and the SPCB.	
(xiv)	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/ monitoring reports.	Being Complied.
(xv)	The environmental statement for each financial year ending 31 st March in Form- V is mandated to be submitted by the project proponent to 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.	Being Complied. A copy of the Environment Statement is enclosed as ANNEXURE-XII .

P. Singh
30.05.2023
Project Officer

PROJECT OFFICER
5.0 MTPA PATHERDIH
NLW Coal Washery
NLW WASHERY, PATHERDIH (BCL)

5.0 MTPA Patherdih NLW Coal Washery					
Year Wise Production Report					
Year	Raw Coal Feed (in MT)	Washed Coal Produced (in MT)	Washed Power Coal Produced (in MT)	Slurry Produced (in MT)	Reject Produced (in MT)
FY 2020-2021	488413.57	58720.97	293868.06	NIL	158978.46
FY 2021-2022	1073692	125237	643893.48	NIL	332694.37
FY 2022-2023	1420056	146490	948926.73	NIL	381974.94

P. Singh.
Project Officer

5.0 MTPA NLW PCW

30/05/2023
**PROJECT OFFICER
5.0 MTPA PATHERDIH
NLW WASHERY, PATHERDIH (BCCL)**

ANNEXURE-II

DUST SUPPRESSION THROUGH WATER SPRINKLING BY MOBILE WATER SPRINKLER AT 5.0 MTPA PATHERDIH NLW COAL WASHERY



WIND BARRIER INSTALLED AROUND REJECTS STOCKYARD
AT 5.0 MTPA PATHERDIH NLW COAL WASHERY



ANNEXURE-III

PLANTATION OF LOCAL SPECIES AROUND THE PERIPHERY OF THE WASHERY



GABION PLANTATION ALONG THE APPROACH ROAD



AVENUE PLANTATION ALONG THE INTERNAL ROADS



**SNEH- SMRITI UPVAN WITH FRUIT-BEARING PLANTS DEVELOPED
IN THE WASHERY**



ANNEXURE-IV

BAG FILTER IN OPERATION AT 5.0 MTPA PATHERDIH NLW COAL WASHERY



**WATER SPRINKLING IN CONVEYOR BELT CARRYING RAW COAL AT
5.0 MTPA PATHERDIH NLW COAL WASHERY**

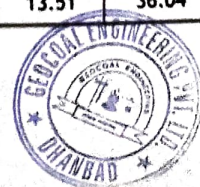


DUST SUPPRESSION ARRANGEMENT OVER THE HOPPER AREA



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Raw Coal

Name of Client		Patherdih Coal Washery BCCL								
Cargo		COAL								
MONTH					Oct-22					
Raw Coal (BC-01)										
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB					Quantity
					ASH %	M %	VM %	FC %	GCV Kcal/Kg	
1-Oct-22	2-Oct-22	PCW/RC/0041	A	3.20	48.90	1.04	15.16	34.90	3788	4218.93
		PCW/RC/0042	B	3.54	49.35	1.01	13.95	35.69	3809	
		PCW/RC/0043	C	3.22	47.66	1.09	14.32	36.93	3914	
2-Oct-22	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
3-Oct-22	4-Oct-22	PCW/RC/0044	A	3.64	50.61	0.98	15.38	33.03	3682	2532.31
		PCW/RC/0045	B	3.05	46.55	1.14	14.90	37.41	4056	
		PCW/RC/0046	C	3.31	47.22	1.20	15.22	36.36	3875	
4-Oct-22	6-Oct-22	PCW/RC/0047	A	5.41	47.05	1.08	12.89	38.98	3958	764.87
		PCW/RC/0048	B	4.28	46.89	0.45	15.12	37.54	4016	
		...	C	...	...	...	...	...	...	
5-Oct-22	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
6-Oct-22	7-Oct-22	PCW/RC/0049	A	3.14	50.09	1.17	11.23	37.51	3513	4145.12
		PCW/RC/0050	B	3.56	48.39	1.20	13.96	36.45	3788	
		PCW/RC/0051	C	3.44	48.36	1.23	13.57	36.84	3742	
7-Oct-22	8-Oct-22	PCW/RC/0052	A	3.75	48.68	1.11	13.67	36.54	3709	357.59
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
8-Oct-22	9-Oct-22	...	A	...	...	...	...	...	...	2841.75
		PCW/RC/0053	B	3.69	46.94	1.18	16.11	35.77	3822	
		PCW/RC/0054	C	3.62	47.73	1.21	13.17	37.89	3748	
9-Oct-22	10-Oct-22	PCW/RC/0055	A	3.21	48.82	1.18	13.81	36.19	3629	4296.48
		PCW/RC/0056	B	3.49	45.86	1.15	14.30	38.69	3917	
		PCW/RC/0057	C	3.13	49.64	1.21	13.07	36.08	3556	
10-Oct-22	11-Oct-22	...	A	...	...	...	...	...	...	2550.99
		PCW/RC/0058	B	3.30	48.59	1.16	13.10	37.15	3642	
		PCW/RC/0059	C	3.86	50.64	1.20	13.07	35.09	3455	
11-Oct-22	12-Oct-22	PCW/RC/0060	A	4.06	50.31	1.17	12.83	35.69	3498	5450.40
		PCW/RC/0061	B	4.02	47.33	1.21	15.21	36.25	3766	
		PCW/RC/0062	C	3.60	49.30	1.15	13.51	36.04	3578	



Himanshi

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Raw Coal

Name of Client		Patherdih Coal Washery BCCL								
CO		COAL								
MONTH		Nov-22								
Raw Coal (BC-01)										
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB					Quantity
					ASH %	M %	VM %	FC %	GCV Kcal/Kg	
1-Nov-22	2-Nov-22	...	A	...	...	...	...	...	...	311.63
		...	B	...	...	...	...	...	...	
		PCW/RC/0101	C	3.57	47.82	1.18	13.49	37.51	3849	
2-Nov-22	3-Nov-22	PCW/RC/0102	A	3.58	49.65	1.13	13.73	35.49	3681	5734.54
		PCW/RC/0103	B	3.67	48.35	1.17	13.48	37.00	3774	
		PCW/RC/0104	C	3.71	48.18	1.2	13.78	36.84	3806	
3-Nov-22	4-Nov-22	PCW/RC/0105	A	3.64	48.92	1.11	13.62	36.35	3745	5335.04
		PCW/RC/0106	B	3.72	50.60	1.14	13.70	34.56	3586	
		PCW/RC/0107	C	3.69	50.27	1.18	13.82	34.73	3626	
4-Nov-22	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
5-Nov-22	6-Nov-22	PCW/RC/0108	A	3.61	48.88	1.13	13.37	36.62	3763	3779.83
		PCW/RC/0109	B	3.58	49.57	1.04	13.43	35.96	3692	
		PCW/RC/0110	C	3.49	47.86	1.20	14.00	36.94	3840	
6-Nov-22	7-Nov-22	...	A	...	...	...	...	...	...	4643.93
		PCW/RC/0111	B	3.56	47.66	1.11	15.06	36.17	3853	
		PCW/RC/0112	C	3.41	49.33	1.17	12.56	36.94	3718	
7-Nov-22	8-Nov-22	PCW/RC/0113	A	3.51	47.68	1.16	14.01	37.15	3856	5736.45
		PCW/RC/0114	B	3.37	47.81	1.19	15.14	35.86	3849	
		PCW/RC/0115	C	3.82	48.89	1.21	14.06	35.84	3758	
8-Nov-22	9-Nov-22	PCW/RC/0116	A	3.38	47.76	1.14	13.75	37.35	3859	5171.16
		PCW/RC/0117	B	3.54	50.66	1.18	13.73	34.43	3592	
		PCW/RC/0118	C	3.35	48.01	1.10	14.29	36.6	3827	
9-Nov-22	10-Nov-22	PCW/RC/0119	A	3.21	51.38	1.10	12.76	34.76	3539	6193.24
		PCW/RC/0120	B	3.53	48.81	1.20	12.87	37.12	3781	
		PCW/RC/0121	C	3.37	48.52	1.16	14.32	36.00	3789	
10-Nov-22	11-Nov-22	PCW/RC/0122	A	3.46	50.10	1.19	13.36	35.35	3748	6026.14
		PCW/RC/0123	B	3.28	47.62	1.17	14.98	36.23	3860	
		PCW/RC/0124	C	3.19	48.30	1.21	15.07	35.42	3752	
11-Nov-22	12-Nov-22	PCW/RC/0125	A	3.21	50.01	1.18	13.80	35.01	3648	5698.37
		PCW/RC/0126	B	3.55	49.74	1.20	13.82	35.24	3674	
		PCW/RC/0127	C	3.29	50.50	1.13	13.60	34.77	3605	
12-Nov-22	13-Nov-22	PCW/RC/0128	A	3.71	49.17	1.18	13.31	36.34	3728	5200.61
		PCW/RC/0129	B	3.55	48.47	1.13	12.81	37.59	3786	
		PCW/RC/0130	C	3.62	49.82	1.16	13.10	35.92	3611	



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Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Raw Coal

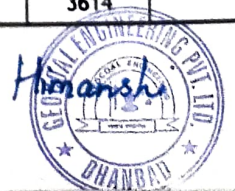
Client		Patherdih Coal Washery BCCL								
CO		COAL								
MONTH		Dec-22								
Raw Coal (BC-01)										
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB					Quantity
					ASH %	M %	VM %	FC %	GCV Kcal/Kg	
1-Dec-22	2-Dec-22	PCW/RC/0185	A	3.42	48.88	1.18	13.97	35.97	3756	4041.44
		PCW/RC/0186	B	3.31	50.40	1.15	13.56	34.89	3609	
		PCW/RC/0187	C	3.28	49.26	1.17	13.64	35.93	3712	
2-Dec-22	3-Dec-22	PCW/RC/0188	A	3.54	49.60	1.16	14.01	35.23	3684	3415.11
		PCW/RC/0189	B	3.38	51.23	0.97	14.13	33.67	3546	
		PCW/RC/0190	C	3.44	47.70	0.97	13.69	37.64	3871	
3-Dec-22	4-Dec-22	PCW/RC/0191	A	3.38	47.61	1.13	14.56	36.70	3874	3231.07
		PCW/RC/0192	B	3.46	46.04	1.17	14.37	38.42	4008	
		PCW/RC/0193	C	3.32	47.43	1.14	14.03	37.40	3889	
4-Dec-22	5-Dec-22	PCW/RC/0194	A	3.28	47.51	0.92	14.52	37.05	3886	5257.03
		PCW/RC/0195	B	3.35	47.20	0.96	13.76	38.08	3912	
		PCW/RC/0196	C	3.39	47.77	1.18	13.31	37.74	3860	
5-Dec-22	6-Dec-22	PCW/RC/0197	A	3.21	48.40	1.12	14.05	36.43	3796	4147.26
		PCW/RC/0198	B	3.29	49.89	0.95	13.70	35.46	3665	
		PCW/RC/0199	C	3.33	48.15	1.13	14.48	36.24	3821	
6-Dec-22	7-Dec-22	PCW/RC/0200	A	3.42	48.10	1.13	13.64	37.13	3836	4265.94
		PCW/RC/0201	B	3.35	47.99	1.11	14.39	36.51	3841	
		PCW/RC/0202	C	3.28	48.52	0.89	14.66	35.93	3789	
7-Dec-22	8-Dec-22	PCW/RC/0203	A	3.33	49.99	1.16	14.06	34.79	3644	4451.18
		PCW/RC/0204	B	3.39	48.84	1.04	12.82	37.30	3761	
		PCW/RC/0205	C	3.46	48.17	0.87	14.05	36.91	3815	
8-Dec-22	9-Dec-22	PCW/RC/0206	A	3.42	48.44	1.16	14.06	36.34	3829	4295.76
		PCW/RC/0207	B	3.37	49.78	1.04	12.82	36.36	3680	
		PCW/RC/0208	C	3.29	48.23	0.87	14.05	36.85	3820	
9-Dec-22	10-Dec-22	PCW/RC/0209	A	3.22	51.14	0.96	13.75	34.15	3551	5210.33
		PCW/RC/0210	B	3.34	48.25	1.16	14.29	36.30	3812	
		PCW/RC/0211	C	3.39	49.76	1.12	13.74	35.38	3673	
10-Dec-22	11-Dec-22	PCW/RC/0212	A	3.44	51.94	1.12	12.34	34.60	3476	4833.39
		PCW/RC/0213	B	3.35	49.40	1.07	13.27	36.26	3704	
		PCW/RC/0214	C	3.30	52.37	1.13	12.02	34.48	3443	
11-Dec-22	12-Dec-22	PCW/RC/0215	A	3.29	50.21	1.18	13.20	35.41	3642	4044.00
		PCW/RC/0216	B	3.35	50.18	1.09	12.49	36.24	3647	
		PCW/RC/0217	C	3.41	49.55	1.12	12.62	36.71	3703	
12-Dec-22	13-Dec-22	PCW/RC/0218	A	3.26	49.27	1.18	12.69	36.86	3781	4254.57
		PCW/RC/0219	B	3.31	50.89	1.07	12.49	35.55	3653	
		PCW/RC/0220	C	3.39	52.06	1.13	12.43	34.38	3531	



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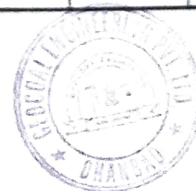
Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Raw Coal

Name of Client		Patherdih Coal Washery BCCL								
MONTH		Jan-23								
Raw Coal (BC-01)										
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB					Quantity
					ASH %	M %	VM %	FC %	GCV Kcal/Kg	
1-Jan-23	2-Jan-23	PCW/RC/0261	A	3.29	48.71	1.13	13.33	36.83	3768	4055.91
		PCW/RC/0262	B	3.38	49.24	1.18	12.95	36.63	3717	
		PCW/RC/0263	C	3.30	51.71	1.05	10.93	36.31	3498	
2-Jan-23	3-Jan-23	PCW/RC/0264	A	3.35	51.79	1.13	12.11	34.97	3486	4608.57
		PCW/RC/0265	B	3.41	51.88	1.16	13.12	33.84	3481	
		PCW/RC/0266	C	3.39	51.15	1.13	12.60	35.12	3544	
3-Jan-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
4-Jan-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
5-Jan-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
6-Jan-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
7-Jan-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
8-Jan-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
9-Jan-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
10-Jan-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
11-Jan-23	12-Jan-23	...	A	...	...	...	...	...	...	3068.05
		PCW/RC/0267	B	3.15	48.86	1.10	14.13	35.91	3633	
		PCW/RC/0268	C	3.26	49.40	1.12	12.54	36.94	3587	
12-Jan-23	13-Jan-23	...	A	...	...	...	...	...	...	3346.62
		PCW/RC/0269	B	3.42	49.02	1.11	13.43	36.44	3749	
		PCW/RC/0270	C	3.57	50.55	1.02	12.01	36.42	3614	



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Raw Coal

Name of Client		Patherdih Coal Washery BCCL								
MONTH		Feb-23								
Raw Coal (BC-01)										
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB					Quantity
					ASH %	M %	VM %	FC %	GCV Kcal/Kg	
1-Feb-23	2-Feb-23	PCW/RC/0318	A	3.05	46.39	1.11	14.03	38.47	3992	5447.78
		PCW/RC/0319	B	3.11	50.29	1.10	12.50	36.11	3631	
		PCW/RC/0320	C	3.09	47.93	1.13	13.67	37.27	3857	
2-Feb-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
3-Feb-23	4-Feb-23	PCW/RC/0321	A	3.32	48.50	1.04	14.09	36.37	3812	4849.06
		PCW/RC/0322	B	3.44	50.55	0.84	12.36	36.25	3620	
		PCW/RC/0323	C	3.21	47.27	0.87	13.71	38.15	3924	
4-Feb-23	5-Feb-23	PCW/RC/0324	A	3.22	49.84	1.07	13.52	35.57	3675	3341.93
		PCW/RC/0325	B	3.47	50.67	0.94	12.69	35.70	3607	
		...	C	...	...	...	...	...	...	
5-Feb-23	6-Feb-23	PCW/RC/0326	A	3.15	46.59	1.13	13.68	38.60	3977	3991.48
		PCW/RC/0327	B	3.31	50.86	0.92	13.16	35.06	3584	
		PCW/RC/0328	C	3.19	49.60	0.86	13.19	36.35	3721	
6-Feb-23	7-Feb-23	PCW/RC/0329	A	3.10	49.84	1.04	13.32	35.80	3686	4086.17
		PCW/RC/0330	B	3.20	50.07	0.92	12.68	36.33	3662	
		PCW/RC/0331	C	3.29	48.46	1.12	13.24	37.18	3803	
7-Feb-23	8-Feb-23	PCW/RC/0332	A	3.35	47.58	1.08	13.25	38.09	3887	4293.35
		PCW/RC/0333	B	3.27	50.79	0.77	10.27	38.17	3630	
		PCW/RC/0334	C	3.11	49.43	1.11	14.03	35.43	3719	
8-Feb-23	9-Feb-23	PCW/RC/0335	A	3.25	48.65	1.13	13.58	36.64	3794	4891.02
		PCW/RC/0336	B	3.29	50.52	0.72	10.13	38.63	3623	
		PCW/RC/0337	C	3.13	49.70	0.82	12.92	36.56	3688	
9-Feb-23	10-Feb-23	PCW/RC/0338	A	3.31	50.27	0.91	11.8	37.02	3649	7040.16
		PCW/RC/0339	B	3.26	49.14	0.79	10.11	39.96	3752	
		PCW/RC/0340	C	3.30	50.76	1.04	10.81	37.39	3604	
10-Feb-23	11-Feb-23	PCW/RC/0341	A	3.15	48.12	1.10	13.55	37.23	3845	5265.79
		PCW/RC/0342	B	3.21	47.17	1.03	13.19	38.61	3932	
		PCW/RC/0343	C	3.19	49.36	0.96	11.05	38.63	3722	
11-Feb-23	12-Feb-23	PCW/RC/0344	A	3.33	46.28	0.90	12.48	40.34	4018	4837.71
		PCW/RC/0345	B	3.19	47.34	0.82	13.24	38.60	3924	
		PCW/RC/0346	C	3.15	51.03	0.88	12.07	36.02	3574	



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Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Raw Coal

Name of Client		Patherdih Coal Washery BCCL								
MONTH		Mar-23								
Raw Coal (BC-01)										
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB					Quantity
					ASH %	M %	VM %	FC %	GCV Kcal/Kg	
1-Mar-23	2-Mar-23	PCW/RC/0394	A	3.12	48.78	1.04	13.48	36.70	3780	6425.88
		PCW/RC/0395	B	3.16	47.24	0.99	13.27	38.50	3927	
		PCW/RC/0396	C	3.11	50.19	0.97	12.51	36.33	3649	
2-Mar-23	3-Mar-23	PCW/RC/0397	A	3.15	52.13	0.91	12.37	34.59	3482	5674.05
		PCW/RC/0398	B	3.19	47.30	0.97	13.76	37.97	3935	
		PCW/RC/0399	C	3.10	48.56	0.87	12.92	37.65	3824	
3-Mar-23	4-Mar-23	PCW/RC/0400	A	3.17	50.92	0.81	11.75	36.52	3592	3577.02
		PCW/RC/0401	B	3.21	48.45	1.10	13.49	36.96	3816	
		PCW/RC/0402	C	3.24	47.51	0.90	12.96	38.63	3908	
4-Mar-23	5-Mar-23	PCW/RC/0403	A	3.12	50.92	0.89	12.27	35.92	3588	3367.45
		PCW/RC/0404	B	3.23	47.30	0.98	14.34	37.38	3921	
		PCW/RC/0405	C	3.19	48.43	1.07	13.66	36.84	3809	
5-Mar-23	6-Mar-23	PCW/RC/0406	A	3.17	50.26	1.12	12.90	35.72	3634	5881.47
		PCW/RC/0407	B	3.11	49.39	1.09	13.22	36.30	3752	
		PCW/RC/0408	C	3.16	48.92	1.07	14.11	35.90	3769	
6-Mar-23	7-Mar-23	PCW/RC/0409	A	3.11	48.95	1.01	13.44	36.60	3811	5859.76
		PCW/RC/0410	B	3.18	47.42	1.06	13.68	37.84	3935	
		PCW/RC/0411	C	3.10	49.24	0.94	12.83	36.99	3768	
7-Mar-23	8-Mar-23	PCW/RC/0412	A	3.22	48.79	1.10	13.94	36.17	3873	4311.91
		PCW/RC/0413	B	3.19	46.21	1.09	13.67	39.03	4020	
		PCW/RC/0414	C	3.13	47.27	1.13	14.04	37.56	3986	
8-Mar-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
9-Mar-23	10-Mar-23	PCW/RC/0415	A	3.16	48.62	1.09	13.65	36.64	3790	1219.81
		PCW/RC/0416	B	3.22	47.85	1.12	13.86	37.17	3855	
		...	C	...	...	...	...	...	...	
10-Mar-23	...	...	A	...	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	...	
		...	C	...	...	...	...	...	...	
11-Mar-23	12-Mar-23	PCW/RC/0417	A	3.28	48.23	0.87	11.67	39.23	3844	5444.38
		PCW/RC/0418	B	3.19	49.75	0.82	11.24	38.19	3696	
		PCW/RC/0419	C	3.23	48.31	0.83	12.41	38.45	3831	
12-Mar-23	13-Mar-23	PCW/RC/0420	A	3.18	49.20	1.14	12.69	36.97	3743	4077.50
		PCW/RC/0421	B	3.21	46.61	1.16	13.95	38.28	3983	
		PCW/RC/0422	C	3.10	49.48	1.12	12.87	36.53	3721	



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Coal

Name of Client		Coal Patherdih Coal Washery BCCL							
MONTH					Oct-22				
Wash Coal (BC-15D)									
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Oct-22	2-Oct-22	...	A	...	...	...	...	...	135.00
		PCW/WC/0028	B	7.21	21.86	1.12	16.98	60.04	
		...	C	...	...	...	...	...	
2-Oct-22	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
3-Oct-22	4-Oct-22	...	A	...	...	...	...	...	500.00
		PCW/WC/0029	B	6.98	20.92	1.31	17.20	60.57	
		PCW/WC/0030	C	7.35	21.20	1.44	16.98	60.38	
4-Oct-22	6-Oct-22	...	A	...	...	...	...	...	105.00
		...	B	...	...	...	...	...	
		PCW/WC/0031	C	7.08	21.55	0.72	17.67	60.06	
5-Oct-22	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
6-Oct-22	7-Oct-22	PCW/WC/0032	A	8.80	20.71	1.47	17.30	60.52	465.00
		PCW/WC/0033	B	8.28	19.39	1.51	17.74	61.36	
		PCW/WC/0034	C	7.94	19.51	1.56	16.70	62.23	
7-Oct-22	8-Oct-22	...	A	...	...	...	...	...	420.00
		PCW/WC/0035	B	8.61	19.05	1.54	16.74	62.67	
		PCW/WC/0036	C	8.33	17.29	1.62	17.5	63.59	
8-Oct-22	9-Oct-22	...	A	...	...	...	...	...	355.00
		PCW/WC/0037	B	9.01	17.93	1.43	18.02	62.62	
		PCW/WC/0038	C	8.14	18.96	1.47	17.72	61.85	
9-Oct-22	10-Oct-22	...	A	...	...	...	...	...	486.00
		PCW/WC/0039	B	9.05	20.67	1.35	18.36	59.62	
		PCW/WC/0040	C	8.51	19.74	1.40	17.88	60.98	
10-Oct-22	11-Oct-22	...	A	...	...	...	...	...	157.00
		...	B	...	...	...	...	...	
		PCW/WC/0041	C	9.33	19.35	1.38	17.32	61.95	



Himanshi

Patherdh Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Coal

Name of Client

Patherdh Coal Washery BCCL

MONTH

Nov-22

Wash Coal (BC-15D)

Date Of Sampling	Date of Preparation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Nov-22	2-Nov-22	...	A	...	...	...	...	...	240.00
		PCW/WC/0085	B	7.19	18.50	1.21	19.05	61.24	
		PCW/WC/0086	C	7.26	18.67	1.23	19.54	60.56	
2-Nov-22	3-Nov-22	PCW/WC/0087	A	7.32	19.65	1.22	13.72	65.41	465.00
		PCW/WC/0088	B	7.44	19.20	1.19	18.19	61.42	
		PCW/WC/0089	C	7.24	18.80	1.24	17.82	62.14	
3-Nov-22	4-Nov-22	...	A	...	...	...	...	...	445.00
		PCW/WC/0090	B	7.22	19.24	1.20	18.26	61.30	
		PCW/WC/0091	C	7.19	18.79	1.23	17.92	62.06	
4-Nov-22	5-Nov-22	PCW/WC/0092	A	7.37	20.23	1.13	14.13	64.51	155.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
5-Nov-22	6-Nov-22	...	A	...	...	...	...	...	395.00
		PCW/WC/0093	B	7.41	18.87	1.17	16.88	63.08	
		PCW/WC/0094	C	7.34	19.03	1.20	18.44	61.33	
6-Nov-22	7-Nov-22	...	A	...	...	...	...	...	380.00
		PCW/WC/0095	B	7.18	19.22	1.19	17.40	62.19	
		PCW/WC/0096	C	7.14	18.91	1.21	17.26	62.62	
7-Nov-22	8-Nov-22	PCW/WC/0097	A	7.18	18.15	1.18	18.43	62.24	545.00
		PCW/WC/0098	B	7.24	18.60	1.17	19.03	61.20	
		PCW/WC/0099	C	7.21	18.45	1.21	18.47	61.87	
8-Nov-22	9-Nov-22	PCW/WC/0100	A	7.18	18.89	1.16	17.61	62.34	465.00
		PCW/WC/0101	B	7.13	19.20	1.19	17.64	61.97	
		PCW/WC/0102	C	7.24	19.44	1.18	17.57	61.81	
9-Nov-22	10-Nov-22	PCW/WC/0103	A	7.28	18.37	1.18	17.80	62.65	574.00
		PCW/WC/0104	B	7.32	19.03	1.21	17.61	62.15	
		PCW/WC/0105	C	7.25	18.66	1.17	17.72	62.45	
10-Nov-22	11-Nov-22	PCW/WC/0106	A	7.36	18.17	1.19	18.45	62.19	423.00
		PCW/WC/0107	B	7.41	19.92	1.15	17.64	61.29	
		PCW/WC/0108	C	7.29	18.28	1.20	18.31	62.21	
11-Nov-22	12-Nov-22	...	A	...	...	...	...	...	360.00
		PCW/WC/0109	B	7.24	18.92	1.18	17.55	62.35	
		PCW/WC/0110	C	7.31	19.26	1.14	17.61	61.99	



Himanshu

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Coal

Name of Client

Patherdih Coal Washery BCCL

MONTH

Dec-22

Wash Coal (BC-15D)

Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Dec-22	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
2-Dec-22	3-Dec-22	...	A	...	...	...	...	...	210.00
		PCW/WC/0155	B	7.48	18.63	1.24	18.22	61.91	
		PCW/WC/0156	C	7.59	18.31	1.22	18.14	62.33	
3-Dec-22	4-Dec-22	...	A	...	...	...	...	...	425.00
		PCW/WC/0157	B	7.25	18.48	1.23	18.25	62.04	
		PCW/WC/0158	C	7.31	18.64	1.19	17.99	62.18	
4-Dec-22	5-Dec-22	PCW/WC/0159	A	7.36	19.68	1.13	17.81	61.38	720.00
		PCW/WC/0160	B	7.41	19.55	1.15	16.96	62.34	
		PCW/WC/0161	C	7.32	19.98	1.17	17.28	61.57	
5-Dec-22	6-Dec-22	PCW/WC/0162	A	7.38	18.61	1.24	18.35	61.80	360.00
		PCW/WC/0163	B	7.29	18.56	1.21	18.26	61.97	
		PCW/WC/0164	C	7.35	18.04	1.22	18.29	62.45	
6-Dec-22	7-Dec-22	...	A	...	...	...	...	...	375.00
		PCW/WC/0165	B	7.57	22.61	1.27	17.45	58.67	
		PCW/WC/0166	C	7.63	20.58	1.03	16.70	61.69	
7-Dec-22	8-Dec-22	PCW/WC/0167	A	7.22	18.60	1.18	17.61	62.61	425.00
		PCW/WC/0168	B	7.31	17.28	1.15	17.24	64.33	
		PCW/WC/0169	C	7.38	21.59	1.17	16.30	60.94	
8-Dec-22	9-Dec-22	...	A	...	...	...	...	...	430.00
		PCW/WC/0170	B	7.41	19.84	0.99	16.99	62.18	
		PCW/WC/0171	C	7.32	21.68	0.92	17.48	59.92	
9-Dec-22	10-Dec-22	...	A	...	...	...	...	...	325.00
		PCW/WC/0172	B	7.45	19.38	1.19	10.17	69.26	
		PCW/WC/0173	C	7.38	21.39	1.20	10.34	67.07	
10-Dec-22	11-Dec-22	PCW/WC/0174	A	7.32	18.97	1.08	14.70	65.25	320.00
		PCW/WC/0175	B	7.38	20.63	1.12	14.66	63.59	
		PCW/WC/0176	C	7.45	19.02	1.16	18.03	61.79	
11-Dec-22	12-Dec-22	PCW/WC/0177	A	7.29	17.82	1.21	17.14	63.83	115.00
		...	B	...	...	...	...	...	
		PCW/WC/0178	C	7.34	18.21	1.18	16.22	64.39	



Himanshu

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Coal

Name of Client

Patherdih Coal Washery BCCL

MONTH

Jan-23

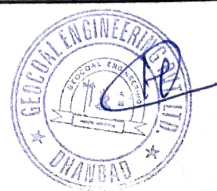
Wash Coal (BC-15D)

Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Jan-23	2-Jan-23	PCW/WC/0216	A	7.82	19.81	1.16	16.39	62.64	385.00
		PCW/WC/0217	B	7.69	17.40	1.03	17.97	63.60	
		...	C	...	...	...	...	...	
2-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
3-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
4-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
5-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
6-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
7-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
8-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
9-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
10-Jan-23	11-Jan-23	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
11-Jan-23	12-Jan-23	...	A	...	...	...	...	...	145.00
		...	B	...	...	...	...	...	
		PCW/WC/0218	C	7.81	16.19	1.18	17.76	64.87	



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Coal

Name of Client		Patherdih Coal Washery BCCL							
MONTH		Feb-23							
Wash Coal (BC-15D)									
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Feb-23	2-Feb-23	...	A	...	...	...	...	...	450.00
		PCW/WC/0258	B	8.83	18.19	1.14	16.03	64.64	
		PCW/WC/0259	C	8.91	19.07	1.16	16.88	62.89	
2-Feb-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
3-Feb-23	4-Feb-23	...	A	...	...	...	...	...	340.00
		...	B	...	...	...	...	...	
		PCW/WC/0260	C	8.95	20.37	1.14	16.24	62.25	
4-Feb-23	5-Feb-23	PCW/WC/0261	A	8.76	18.08	1.16	17.30	63.46	240.00
		PCW/WC/0262	B	8.91	17.35	1.19	17.96	63.50	
		...	C	...	...	...	...	...	
5-Feb-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
6-Feb-23	7-Feb-23	PCW/WC/0263	A	8.99	17.74	1.19	17.76	63.31	465.00
		PCW/WC/0264	B	8.84	19.58	1.16	17.26	62.00	
		PCW/WC/0265	C	9.01	17.93	1.17	17.07	63.83	
7-Feb-23	8-Feb-23	...	A	...	...	...	...	...	410.00
		PCW/WC/0266	B	8.76	17.77	1.15	17.74	63.34	
		PCW/WC/0267	C	8.81	19.70	1.17	17.25	61.88	
8-Feb-23	9-Feb-23	PCW/WC/0268	A	8.75	17.53	1.10	17.25	64.12	440.00
		PCW/WC/0269	B	8.93	18.78	1.16	16.95	63.11	
		PCW/WC/0270	C	8.88	20.59	1.17	17.17	61.07	
9-Feb-23	10-Feb-23	...	A	...	...	...	...	...	465.00
		PCW/WC/0271	B	8.91	20.96	1.13	17.21	60.70	
		PCW/WC/0272	C	8.74	22.44	1.17	17.23	59.16	
10-Feb-23	11-Feb-23	PCW/WC/0273	A	8.83	21.45	1.17	16.92	60.46	420.00
		PCW/WC/0274	B	8.69	22.03	1.14	16.37	60.46	
		PCW/WC/0275	C	8.61	22.21	1.12	16.58	60.09	
11-Feb-23	12-Feb-23	PCW/WC/0276	A	8.99	22.52	1.19	17.12	59.17	290.00
		PCW/WC/0277	B	8.72	24.11	1.16	16.80	57.93	
		PCW/WC/0278	C	8.87	18.70	1.14	17.71	62.45	



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Coal

Client

Patherdih Coal Washery BCCL

TH

Mar-23

Wash Coal (BC-15D)

Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Mar-23	2-Mar-23	...	A	...	...	...	...	...	420.00
		PCW/WC/0314	B	8.84	19.08	1.13	16.15	63.64	
		PCW/WC/0315	C	8.76	19.23	1.15	16.44	63.18	
2-Mar-23	3-Mar-23	...	A	...	...	...	...	...	450.00
		PCW/WC/0316	B	8.77	19.73	1.11	17.46	61.70	
		PCW/WC/0317	C	8.86	18.14	1.16	18.03	62.67	
3-Mar-23	4-Mar-23	...	A	...	...	...	...	...	280.00
		PCW/WC/0318	B	8.85	18.92	1.09	16.43	63.56	
		PCW/WC/0319	C	8.93	17.05	1.17	19.04	62.74	
4-Mar-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
5-Mar-23	6-Mar-23	PCW/WC/0320	A	8.77	20.31	1.14	18.22	60.33	810.00
		PCW/WC/0321	B	8.86	18.23	1.16	17.69	62.92	
		PCW/WC/0322	C	8.73	19.57	1.19	17.45	61.79	
6-Mar-23	7-Mar-23	PCW/WC/0323	A	8.91	19.79	1.09	18.87	60.25	750.00
		PCW/WC/0324	B	8.86	18.57	1.16	17.54	62.73	
		PCW/WC/0325	C	8.93	19.16	1.12	17.81	61.91	
7-Mar-23	8-Mar-23	PCW/WC/0326	A	8.84	18.20	1.04	18.12	62.64	360.00
		PCW/WC/0327	B	8.96	18.17	1.09	18.04	62.70	
		...	C	...	...	...	...	...	
8-Mar-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
9-Mar-23	10-Mar-23	...	A	...	...	...	...	...	400.00
		PCW/WC/0328	B	8.55	18.10	1.18	18.57	62.15	
		PCW/WC/0329	C	8.63	17.85	1.13	18.84	62.18	
10-Mar-23	11-Mar-23	PCW/WC/0330	A	8.81	17.62	1.14	17.63	63.61	150.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
11-Mar-23	12-Mar-23	...	A	...	...	...	...	...	440.00
		PCW/WC/0331	B	8.77	19.72	1.13	16.28	62.87	
		PCW/WC/0332	C	8.85	18.23	1.16	17.22	63.39	



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Power Coal

Name of Client

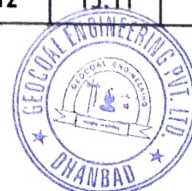
Patherdih Coal Washery BCCL

MONTH

Oct-22

Wash Power Coal (BC-16C)

Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Oct-22	2-Oct-22	...	A	...	...	...	...	...	788.00
		PCW/WPC/0028	B	7.54	45.20	1.13	15.42	38.25	
		...	C	...	...	...	...	...	
2-Oct-22	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
3-Oct-22	4-Oct-22	...	A	...	...	...	...	...	3100.00
		PCW/WPC/0029	B	7.26	44.95	1.26	14.86	38.93	
		PCW/WPC/0030	C	8.02	46.17	1.11	16.20	36.52	
4-Oct-22	6-Oct-22	...	A	...	...	...	...	...	649.80
		...	B	...	...	...	...	...	
		PCW/WPC/0031	C	7.55	45.57	1.15	12.62	40.66	
5-Oct-22	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
6-Oct-22	7-Oct-22	PCW/WPC/0032	A	7.15	46.05	1.16	14.34	38.45	3004.20
		PCW/WPC/0033	B	7.50	46.73	1.34	15.74	36.19	
		PCW/WPC/0034	C	7.22	44.59	1.28	13.78	40.35	
7-Oct-22	8-Oct-22	...	A	...	...	...	...	...	2623.09
		PCW/WPC/0035	B	7.35	46.92	1.10	13.17	38.81	
		PCW/WPC/0036	C	6.80	45.67	1.29	14.96	38.08	
8-Oct-22	9-Oct-22	...	A	...	...	...	...	...	2048.20
		PCW/WPC/0037	B	7.06	45.70	1.32	11.47	41.51	
		PCW/WPC/0038	C	7.13	45.92	1.17	14.61	38.30	
9-Oct-22	10-Oct-22	...	A	...	...	...	...	...	2988.38
		PCW/WPC/0039	B	7.41	45.59	1.17	15.37	37.87	
		PCW/WPC/0040	C	7.63	45.87	1.23	14.88	38.02	
10-Oct-22	11-Oct-22	...	A	...	...	...	...	...	970.70
		...	B	...	...	...	...	...	
		PCW/WPC/0041	C	6.93	46.40	1.12	15.11	37.37	



Himanshi

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Power Coal

Patherdih Coal Washery BCCL

Name of Client

MONTH

Nov-22

Wash Power Coal (BC-16C)

Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Nov-22	2-Nov-22	...	A	...	...	...	...	...	2170.00
		PCW/WPC/0085	B	7.58	46.98	1.13	13.00	38.89	
		PCW/WPC/0086	C	7.46	46.15	1.11	13.71	39.03	
2-Nov-22	3-Nov-22	PCW/WPC/0087	A	7.59	46.39	1.18	13.35	39.08	3830.00
		PCW/WPC/0088	B	7.62	46.75	1.25	13.25	38.75	
		PCW/WPC/0089	C	7.48	46.18	1.16	12.87	39.79	
3-Nov-22	4-Nov-22	...	A	...	...	...	...	...	3555.00
		PCW/WPC/0090	B	7.72	42.92	1.17	14.69	41.22	
		PCW/WPC/0091	C	7.67	43.90	0.95	14.16	40.99	
4-Nov-22	5-Nov-22	PCW/WPC/0092	A	7.62	45.68	1.18	14.20	38.94	1175.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
5-Nov-22	6-Nov-22	...	A	...	...	...	...	...	2335.00
		PCW/WPC/0093	B	7.49	46.51	1.13	13.22	39.14	
		PCW/WPC/0094	C	7.52	47.02	1.10	13.02	38.86	
6-Nov-22	7-Nov-22	...	A	...	...	...	...	...	2685.00
		PCW/WPC/0095	B	7.51	46.45	1.19	13.42	38.94	
		PCW/WPC/0096	C	7.56	45.88	1.20	13.40	39.52	
7-Nov-22	8-Nov-22	PCW/WPC/0097	A	7.54	47.68	1.04	13.64	37.64	4035.00
		PCW/WPC/0098	B	7.63	46.44	1.13	13.54	38.89	
		PCW/WPC/0099	C	7.59	46.12	1.17	13.46	39.25	
8-Nov-22	9-Nov-22	PCW/WPC/0100	A	7.50	46.13	1.14	14.19	38.54	3325.00
		PCW/WPC/0101	B	7.64	45.91	1.10	14.21	38.78	
		PCW/WPC/0102	C	7.49	46.34	1.12	14.17	38.37	
9-Nov-22	10-Nov-22	PCW/WPC/0103	A	7.64	46.14	1.14	13.20	39.52	4120.00
		PCW/WPC/0104	B	7.82	46.92	1.16	14.11	37.81	
		PCW/WPC/0105	C	7.71	47.34	1.13	13.63	37.90	
10-Nov-22	11-Nov-22	PCW/WPC/0106	A	7.75	44.39	1.18	14.24	40.19	3640.00
		PCW/WPC/0107	B	7.51	45.42	1.15	13.87	39.56	
		PCW/WPC/0108	C	7.67	44.06	1.09	14.53	40.32	
11-Nov-22	12-Nov-22	...	A	...	...	...	...	...	3080.00
		PCW/WPC/0109	B	7.56	46.51	1.12	13.50	38.87	
		PCW/WPC/0110	C	7.63	46.82	1.16	13.71	38.31	



Himanshi

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Power Coal

Name of Client		Patherdih Coal Washery BCCL							
MONTH		Dec-22							
Wash Power Coal (BC-16C)									
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Dec-22	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
2-Dec-22	3-Dec-22	...	A	...	...	...	...	...	1870.00
		PCW/WPC/0155	B	7.64	43.65	1.10	14.40	40.85	
		PCW/WPC/0156	C	7.73	41.51	1.13	14.72	42.64	
3-Dec-22	4-Dec-22	...	A	...	...	...	...	...	3240.00
		PCW/WPC/0157	B	7.67	42.45	1.07	13.83	42.65	
		PCW/WPC/0158	C	7.53	41.10	1.09	14.54	43.27	
4-Dec-22	5-Dec-22	PCW/WPC/0159	A	7.59	43.24	1.13	13.50	42.13	6170.00
		PCW/WPC/0160	B	7.64	44.06	1.10	14.16	40.68	
		PCW/WPC/0161	C	7.69	44.63	1.13	13.03	41.21	
5-Dec-22	6-Dec-22	PCW/WPC/0162	A	7.84	42.41	1.09	14.31	42.19	3630.00
		PCW/WPC/0163	B	7.71	43.03	1.12	14.46	41.39	
		PCW/WPC/0164	C	7.68	43.61	1.15	14.56	40.68	
6-Dec-22	7-Dec-22	...	A	...	...	...	...	...	3865.00
		PCW/WPC/0165	B	7.86	44.91	0.84	14.02	40.23	
		PCW/WPC/0166	C	7.79	46.28	0.79	13.12	39.81	
7-Dec-22	8-Dec-22	PCW/WPC/0167	A	7.64	43.33	0.91	13.65	42.11	4030.00
		PCW/WPC/0168	B	7.69	42.99	1.11	12.97	42.93	
		PCW/WPC/0169	C	7.73	43.14	0.84	13.07	42.95	
8-Dec-22	9-Dec-22	...	A	...	...	...	...	...	4080.00
		PCW/WPC/0170	B	7.59	45.33	0.95	12.76	40.96	
		PCW/WPC/0171	C	7.66	44.12	0.92	13.15	41.81	
9-Dec-22	10-Dec-22	...	A	...	...	...	...	...	2895.00
		PCW/WPC/0172	B	7.74	46.01	1.03	13.34	39.62	
		PCW/WPC/0173	C	7.68	45.12	1.12	13.63	40.13	
10-Dec-22	11-Dec-22	PCW/WPC/0174	A	7.83	46.14	1.09	12.41	40.36	3580.00
		PCW/WPC/0175	B	7.75	46.51	1.12	12.96	39.41	
		PCW/WPC/0176	C	7.81	45.38	1.05	13.44	40.13	
11-Dec-22	12-Dec-22	PCW/WPC/0177	A	7.58	44.31	1.02	13.40	41.27	1200.00
		...	B	...	...	...	...	...	
		PCW/WPC/0178	C	7.65	45.24	1.10	13.15	40.51	



Himanshu

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Power Coal

Name of Client **Patherdih Coal Washery BCCL**

MONTH **Jan-23**

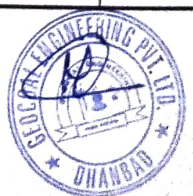
Wash Power Coal (BC-16C)

Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Jan-23	2-Jan-23	PCW/WPC/0216	A	8.12	46.39	0.98	12.96	39.67	2680.00
		PCW/WPC/0217	B	7.94	47.73	1.02	12.38	38.87	
		...	C	...	...	...	...	...	
2-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
3-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
4-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
5-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
6-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
7-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
8-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
9-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
10-Jan-23	11-Jan-23	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
11-Jan-23	12-Jan-23	...	A	...	...	...	...	...	1140.00
		...	B	...	...	...	...	...	
		PCW/WPC/0218	C	8.11	47.05	1.14	13.10	38.71	



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Power Coal

Name of Client		Patherdih Coal Washery BCCL							
MONTH		Feb-23							
Wash Power Coal (BC-16C).									
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Feb-23	2-Feb-23	...	A	...	...	...	...	...	3260.00
		PCW/WPC/0258	B	9.11	43.06	1.08	14.02	41.84	
		PCW/WPC/0259	C	9.16	46.27	1.02	14.13	38.58	
2-Feb-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
3-Feb-23	4-Feb-23	...	A	...	...	...	...	...	2950.00
		...	B	...	...	...	...	...	
		PCW/WPC/0260	C	9.21	46.89	0.90	11.44	40.77	
4-Feb-23	5-Feb-23	PCW/WPC/0261	A	9.11	46.74	1.05	13.04	39.17	2440.00
		PCW/WPC/0262	B	9.18	44.55	1.12	14.15	40.18	
		...	C	...	...	...	...	...	
5-Feb-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
6-Feb-23	7-Feb-23	PCW/WPC/0263	A	9.12	42.85	1.11	14.54	41.50	4620.00
		PCW/WPC/0264	B	9.23	45.97	1.13	13.59	39.31	
		PCW/WPC/0265	C	9.19	44.37	1.08	14.17	40.38	
7-Feb-23	8-Feb-23	...	A	...	...	...	...	...	4110.00
		PCW/WPC/0266	B	9.15	46.00	1.12	14.30	38.58	
		PCW/WPC/0267	C	9.29	45.14	1.14	13.98	39.74	
8-Feb-23	9-Feb-23	PCW/WPC/0268	A	9.35	46.24	0.98	13.65	39.13	4600.00
		PCW/WPC/0269	B	9.27	44.40	1.03	12.96	41.61	
		PCW/WPC/0270	C	9.23	46.23	1.08	14.15	38.54	
9-Feb-23	10-Feb-23	...	A	...	...	...	...	...	4830.00
		PCW/WPC/0271	B	9.10	45.60	1.02	13.92	39.46	
		PCW/WPC/0272	C	9.21	46.34	1.07	13.96	38.63	
10-Feb-23	11-Feb-23	PCW/WPC/0273	A	9.06	44.94	1.13	14.03	39.90	4200.00
		PCW/WPC/0274	B	9.27	45.25	1.11	14.22	39.42	
		PCW/WPC/0275	C	9.13	46.18	1.17	13.85	38.80	
11-Feb-23	12-Feb-23	PCW/WPC/0276	A	9.22	45.28	1.08	14.09	39.55	2440.00
		PCW/WPC/0277	B	9.44	45.87	0.96	13.65	39.52	
		PCW/WPC/0278	C	9.29	46.81	1.08	14.15	37.96	



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Wash Power Coal

Client

Patherdih Coal Washery BCCL

TH

Mar-23

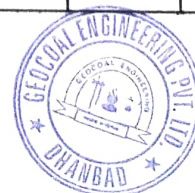
Wash Power Coal (BC-16C)

Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Mar-23	2-Mar-23	...	A	...	...	...	...	...	2930.00
		PCW/WPC/0314	B	9.31	43.99	1.12	12.95	41.94	
		PCW/WPC/0315	C	9.48	45.41	1.03	13.62	39.94	
2-Mar-23	3-Mar-23	...	A	...	...	...	...	...	3130.00
		PCW/WPC/0316	B	9.54	44.41	1.12	14.06	40.41	
		PCW/WPC/0317	C	9.69	45.77	0.94	12.70	40.59	
3-Mar-23	4-Mar-23	...	A	...	...	...	...	...	2080.00
		PCW/WPC/0318	B	9.74	44.14	1.12	13.90	40.84	
		PCW/WPC/0319	C	9.67	46.34	1.04	13.41	39.21	
4-Mar-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
5-Mar-23	6-Mar-23	PCW/WPC/0320	A	9.67	46.27	0.97	14.19	38.57	5410.00
		PCW/WPC/0321	B	9.71	46.48	0.84	15.09	37.59	
		PCW/WPC/0322	C	9.65	45.72	1.02	13.97	39.29	
6-Mar-23	7-Mar-23	PCW/WPC/0323	A	9.77	45.34	1.09	13.91	39.66	5460.00
		PCW/WPC/0324	B	9.63	46.39	0.96	14.07	38.58	
		PCW/WPC/0325	C	9.59	46.61	1.04	13.86	38.49	
7-Mar-23	8-Mar-23	PCW/WPC/0326	A	9.81	45.27	1.01	14.44	39.28	2720.00
		PCW/WPC/0327	B	9.73	43.26	0.96	14.23	41.55	
		...	C	...	...	...	...	...	
8-Mar-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
9-Mar-23	10-Mar-23	...	A	...	...	...	...	...	3130.00
		PCW/WPC/0328	B	9.71	45.82	0.92	13.99	39.27	
		PCW/WPC/0329	C	9.65	46.53	1.13	13.78	38.56	
10-Mar-23	11-Mar-23	PCW/WPC/0330	A	9.73	44.61	1.10	13.14	41.15	1290.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
11-Mar-23	12-Mar-23	...	A	...	...	...	...	...	3210.00
		PCW/WPC/0331	B	9.55	46.37	1.10	13.01	39.52	
		PCW/WPC/0332	C	9.67	45.21	1.13	12.77	40.89	
12-Mar-23	13-Mar-23	PCW/WPC/0333	A	9.53	46.15	1.09	13.96	38.80	820.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Reject

Name of Client		Patherdih Coal Washery BCCL							
MONTH					Oct-22				
Reject (BC-14)									
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Oct-22	2-Oct-22	...	A	...	...	...	...	...	350.39
		PCW/REJ/0028	B	9.21	61.95	1.43	11.14	25.48	
		...	C	...	...	...	...	...	
2-Oct-22	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
3-Oct-22	4-Oct-22	...	A	...	...	...	...	...	1387.50
		PCW/REJ/0029	B	8.78	62.43	1.26	12.15	24.16	
		PCW/REJ/0030	C	9.06	64.51	1.09	10.86	23.54	
4-Oct-22	6-Oct-22	...	A	...	...	...	...	...	295.20
		...	B	...	...	...	...	...	
		PCW/REJ/0031	C	8.24	69.29	0.57	10.55	19.59	
5-Oct-22	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
6-Oct-22	7-Oct-22	PCW/REJ/0032	A	5.93	68.64	1.27	11.32	18.77	1360.80
		PCW/REJ/0033	B	5.17	66.08	1.19	14.88	17.85	
		PCW/REJ/0034	C	6.49	65.08	1.34	12.78	20.80	
7-Oct-22	8-Oct-22	...	A	...	...	...	...	...	1167.41
		PCW/REJ/0035	B	5.04	70.26	1.33	10.23	18.18	
		PCW/REJ/0036	C	4.83	65.75	1.14	11.20	21.91	
8-Oct-22	9-Oct-22	...	A	...	...	...	...	...	956.80
		PCW/REJ/0037	B	5.22	68.92	1.28	11.12	18.68	
		PCW/REJ/0038	C	5.38	70.79	1.22	11.61	16.38	
9-Oct-22	10-Oct-22	...	A	...	...	...	...	...	1355.62
		PCW/REJ/0039	B	6.04	63.97	1.22	12.86	21.95	
		PCW/REJ/0040	C	5.88	64.75	1.13	13.42	20.70	



Himanshi

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Reject

of Client

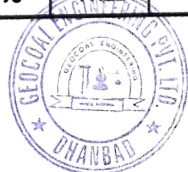
Patherdih Coal Washery BCCL

MONTH

Nov-22

Reject (BC-14)

Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Nov-22	2-Nov-22	...	A	...	...	...	...	...	750.00
		PCW/REJ/0085	B	8.67	72.68	0.81	12.16	14.35	
		PCW/REJ/0086	C	8.72	73.82	1.16	11.73	13.29	
2-Nov-22	3-Nov-22	PCW/REJ/0087	A	8.84	67.08	1.15	13.48	18.29	1375.70
		PCW/REJ/0088	B	8.71	68.20	1.26	14.50	16.04	
		PCW/REJ/0089	C	8.76	70.15	0.93	11.44	17.48	
3-Nov-22	4-Nov-22	...	A	...	...	...	...	...	1369.47
		PCW/REJ/0090	B	8.66	70.47	0.9	11.65	16.98	
		PCW/REJ/0091	C	8.80	69.78	1.13	13.44	15.65	
4-Nov-22	5-Nov-22	PCW/REJ/0092	A	8.68	72.91	1.21	13.65	12.23	530.37
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
5-Nov-22	6-Nov-22	...	A	...	...	...	...	...	1169.00
		PCW/REJ/0093	B	8.82	72.11	0.93	11.33	15.63	
		PCW/REJ/0094	C	8.74	71.64	0.89	11.59	15.88	
6-Nov-22	7-Nov-22	...	A	...	...	...	...	...	1266.70
		PCW/REJ/0095	B	8.68	72.44	0.92	11.63	15.01	
		PCW/REJ/0096	C	8.73	71.86	0.86	12.11	15.17	
7-Nov-22	8-Nov-22	PCW/REJ/0097	A	8.74	72.81	0.78	12.60	13.81	1400.43
		PCW/REJ/0098	B	8.63	72.49	0.83	13.10	13.58	
		PCW/REJ/0099	C	8.68	71.88	0.79	12.80	14.53	
8-Nov-22	9-Nov-22	PCW/REJ/0100	A	8.66	72.19	0.92	12.17	14.72	1159.59
		PCW/REJ/0101	B	8.71	71.93	0.89	12.20	14.98	
		PCW/REJ/0102	C	8.77	72.75	0.86	12.11	14.28	
9-Nov-22	10-Nov-22	PCW/REJ/0103	A	8.71	70.31	0.90	10.89	17.90	1479.41
		PCW/REJ/0104	B	8.86	71.20	0.94	11.04	16.82	
		PCW/REJ/0105	C	8.24	69.87	0.98	10.92	18.23	
10-Nov-22	11-Nov-22	PCW/REJ/0106	A	8.33	72.71	0.92	11.28	15.09	1184.17
		PCW/REJ/0107	B	8.72	71.48	0.99	13.71	13.82	
		PCW/REJ/0108	C	8.41	72.03	1.04	13.25	13.68	
11-Nov-22	12-Nov-22	...	A	...	...	...	...	...	1099.52
		PCW/REJ/0109	B	8.60	70.95	0.90	10.77	17.38	
		PCW/REJ/0110	C	8.54	71.34	0.98	11.22	16.46	



Himanshi

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Reject

Name of Client		Patherdih Coal Washery BCCL							
MONTH		Dec-22							
Reject (BC-14)									
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Dec-22	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
2-Dec-22	3-Dec-22	...	A	...	...	...	...	...	667.73
		PCW/REJ/0155	B	8.74	72.08	0.96	10.11	16.85	
		PCW/REJ/0156	C	8.52	68.39	0.83	11.12	19.66	
3-Dec-22	4-Dec-22	...	A	...	...	...	...	...	1157.45
		PCW/REJ/0157	B	8.55	68.53	0.81	11.32	19.34	
		PCW/REJ/0158	C	8.69	71.71	0.85	10.56	16.88	
4-Dec-22	5-Dec-22	PCW/REJ/0159	A	8.71	71.66	0.82	11.26	16.26	2240.93
		PCW/REJ/0160	B	8.64	72.72	0.84	10.61	15.83	
		PCW/REJ/0161	C	8.69	69.02	0.96	10.81	19.21	
5-Dec-22	6-Dec-22	PCW/REJ/0162	A	8.73	68.85	0.90	10.20	20.05	1249.31
		PCW/REJ/0163	B	8.69	71.13	0.96	10.34	17.57	
		PCW/REJ/0164	C	8.62	68.66	1.04	10.77	19.53	
6-Dec-22	7-Dec-22	...	A	...	...	...	...	...	1253.32
		PCW/REJ/0165	B	8.47	73.50	0.74	9.86	15.90	
		PCW/REJ/0166	C	8.55	71.51	0.82	13.41	14.26	
7-Dec-22	8-Dec-22	PCW/REJ/0167	A	8.47	67.35	0.89	9.38	22.38	1869.44
		PCW/REJ/0168	B	8.52	69.66	0.84	11.76	17.74	
		PCW/REJ/0169	C	8.59	72.74	0.87	9.95	16.44	
8-Dec-22	9-Dec-22	...	A	...	...	...	...	...	1710.75
		PCW/REJ/0170	B	8.61	68.49	1.04	10.14	20.33	
		PCW/REJ/0171	C	8.54	72.79	0.81	9.51	16.89	
9-Dec-22	10-Dec-22	...	A	...	...	...	...	...	1508.58
		PCW/REJ/0172	B	8.66	71.81	0.78	10.17	17.24	
		PCW/REJ/0173	C	8.72	72.33	0.75	10.34	16.58	
10-Dec-22	11-Dec-22	PCW/REJ/0174	A	8.52	72.97	0.86	9.86	16.31	1285.81
		PCW/REJ/0175	B	8.61	72.84	0.97	10.09	16.10	
		PCW/REJ/0176	C	8.69	73.63	1.03	10.30	15.04	
11-Dec-22	12-Dec-22	PCW/REJ/0177	A	8.71	72.40	0.84	9.44	17.32	546.06
		...	B	...	...	...	...	...	
		PCW/REJ/0178	C	8.66	71.23	1.01	9.51	18.25	



Himanshi

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Reject

Name of Client		Patherdih Coal Washery BCCL							
MONTH		Jan-23							
Reject (BC-14)									
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Jan-23	2-Jan-23	PCW/REJ/0216	A	8.89	73.58	0.76	10.28	15.38	856.07
		PCW/REJ/0217	B	8.65	72.27	0.72	10.23	16.78	
		...	C	...	...	...	...	...	
2-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
3-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
4-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
5-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
6-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
7-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
8-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
9-Jan-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
10-Jan-23	11-Jan-23	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
11-Jan-23	12-Jan-23	...	A	...	...	...	...	...	365.10
		...	B	...	...	...	...	...	
		PCW/REJ/0218	C	8.64	70.82	0.82	10.02	18.34	

Himanshu
DHANBAD

Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Reject

Name of Client		Patherdih Coal Washery BCCL							
MONTH		Feb-23							
Reject (BC-14)									
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Feb-23	2-Feb-23	...	A	...	...	...	...	...	1665.14
		PCW/REJ/0258	B	9.57	69.74	0.79	10.20	19.27	
		PCW/REJ/0259	C	9.35	70.85	0.74	9.88	18.53	
2-Feb-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
3-Feb-23	4-Feb-23	...	A	...	...	...	...	...	856.99
		...	B	...	...	...	...	...	
		PCW/REJ/0260	C	9.51	69.42	0.80	10.70	19.08	
4-Feb-23	5-Feb-23	PCW/REJ/0261	A	9.37	71.28	0.72	8.97	19.03	733.56
		PCW/REJ/0262	B	9.48	69.41	0.83	10.47	19.29	
		...	C	...	...	...	...	...	
5-Feb-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
6-Feb-23	7-Feb-23	PCW/REJ/0263	A	9.55	70.53	0.74	9.89	18.84	1329.31
		PCW/REJ/0264	B	9.64	68.52	1.03	10.06	20.39	
		PCW/REJ/0265	C	9.51	67.95	0.81	10.58	20.66	
7-Feb-23	8-Feb-23	...	A	...	...	...	...	...	1169.74
		PCW/REJ/0266	B	9.49	72.61	0.72	10.13	16.54	
		PCW/REJ/0267	C	9.57	69.07	0.86	10.26	19.81	
8-Feb-23	9-Feb-23	PCW/REJ/0268	A	9.64	67.03	0.83	10.13	22.01	1062.30
		PCW/REJ/0269	B	9.55	69.22	0.91	10.25	19.62	
		PCW/REJ/0270	C	9.69	71.15	0.65	9.55	18.65	
9-Feb-23	10-Feb-23	...	A	...	...	...	...	...	1114.86
		PCW/REJ/0271	B	9.70	69.50	0.78	10.79	18.93	
		PCW/REJ/0272	C	9.64	72.55	0.74	10.73	15.98	
10-Feb-23	11-Feb-23	PCW/REJ/0273	A	9.57	68.70	0.89	11.28	19.13	1066.47
		PCW/REJ/0274	B	9.71	67.84	0.81	11.50	19.85	
		PCW/REJ/0275	C	9.63	68.61	0.86	11.18	19.35	
11-Feb-23	12-Feb-23	PCW/REJ/0276	A	9.74	67.36	0.94	10.92	20.78	575.41
		PCW/REJ/0277	B	9.61	68.84	1.02	10.31	19.83	
		PCW/REJ/0278	C	9.69	65.88	0.84	10.88	22.40	



Patherdih Coal Washery Date Wise & Shift Wise Quality Test Report of Reject

of Client		Patherdih Coal Washery BCCL							
TH		Mar-23							
Reject (BC-14)									
Date Of Sampling	Date of Preperation	Sample ID No.	Shift	TM %	ADB				Quantity
					ASH %	M %	VM %	FC %	
1-Mar-23	2-Mar-23	...	A	...	...	...	...	...	1037.97
		PCW/REJ/0314	B	9.81	68.60	0.89	10.19	20.32	
		PCW/REJ/0315	C	9.95	69.88	0.99	9.08	20.05	
2-Mar-23	3-Mar-23	...	A	...	...	...	...	...	1122.61
		PCW/REJ/0316	B	9.97	67.36	0.78	11.65	20.21	
		PCW/REJ/0317	C	9.83	68.99	0.81	10.57	19.63	
3-Mar-23	4-Mar-23	...	A	...	...	...	...	...	341.12
		PCW/REJ/0318	B	9.73	68.27	0.80	11.80	19.13	
		PCW/REJ/0319	C	9.88	70.01	0.74	11.35	17.90	
4-Mar-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
5-Mar-23	6-Mar-23	PCW/REJ/0320	A	9.87	69.86	0.79	11.23	18.12	1505.40
		PCW/REJ/0321	B	9.94	68.05	0.82	12.90	18.23	
		PCW/REJ/0322	C	9.81	70.25	0.71	10.81	18.23	
6-Mar-23	7-Mar-23	PCW/REJ/0323	A	9.96	69.04	0.99	11.96	18.01	1517.60
		PCW/REJ/0324	B	9.81	68.09	0.87	10.68	20.36	
		PCW/REJ/0325	C	9.93	68.34	0.90	10.41	20.35	
7-Mar-23	8-Mar-23	PCW/REJ/0326	A	9.98	67.84	0.98	12.24	18.94	680.42
		PCW/REJ/0327	B	9.87	68.51	0.91	11.96	18.62	
		...	C	...	...	...	...	...	
8-Mar-23	...	...	A	...	...	...	...	...	0.00
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
9-Mar-23	10-Mar-23	...	A	...	...	...	...	...	635.10
		PCW/REJ/0328	B	9.87	70.19	0.82	10.70	18.29	
		PCW/REJ/0329	C	9.99	72.26	0.96	11.23	15.55	
10-Mar-23	11-Mar-23	PCW/REJ/0330	A	9.91	70.34	0.83	9.47	19.36	494.89
		...	B	...	...	...	...	...	
		...	C	...	...	...	...	...	
11-Mar-23	12-Mar-23	...	A	...	...	...	...	...	865.63
		PCW/REJ/0331	B	9.89	71.81	0.78	10.20	17.21	
		PCW/REJ/0332	C	9.96	69.05	0.71	10.69	19.55	



ANNEXURE-VI

DRAIN ALONG THE UNLOADING SIDING AT 5.0 MTPA PATHERDIH NLW COAL WASHERY



**DRAIN ALONG THE BOUNDARY WALL AT 5.0 MTPA PATHERDIH
NLW COAL WASHERY**



ANNEXURE-VII

OIL & GREASE TRAP AT 5.0 MTPA PATHERDIH NLW COAL WASHERY



सीएसआईआर-केन्द्रीय खनन एवं ईंधन अनुसंधान संस्थान
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
बरवा रोड, धनबाद - 826 015, झारखण्ड, भारत
एक आई एस ओ 9001 प्रमाणित संस्थान



CSIR- Central Institute of Mining and Fuel Research
(Council of Scientific and Industrial Research)
Barwa Road, Dhanbad - 826 015, Jharkhand, India
An ISO 9001 Certified Institute

II/TR/22-23/UT/077

Central Institute of Mining and Fuel Research
Digwadih Campus, Dhanbad - 828 108

This is not a certificate and not valid for purpose of
contracts and can not be produced in a court of law.

परीक्षण रिपोर्ट
Test Report

Test Report

Issue To: Project Officer, 5.0 MTPA Patherdih NLW Washery, P.O. - Patherdih, Dist. - Dhanbad, Jharkhand.	Job Code Chemical	CIMFR/CA/EEC/FEB-01/2023
	Date of Issue	30-03-2023
Reference No.: BCCL/NLW PCW/2022-23/2002	Date: 01-02-2023	

Sample Name/Description	Coal
Sample Receiving Date	01.02.2023

Test Result

Sr. no.	Sample code	Arsenic ^a	Cadmium ^a	Chromium ^a	Mercury ^b	Lead ^a	Selenium ^a
1.	Coal sample	BDL	BDL	0.08 mg/L	56 µg/kg	0.02 mg/L	BDL

a = ASTM D6349 b = ASTM D6722

*Sampling not done by CIMFR.

*BDL= Below Detection Limit

....End of report....

निमित्त मारता
30.03.2023

30.03.2023

प्रमुख, परियोजना प्रबंधन एवं उद्योग संपर्क
Head, Project Planning & Industry Interface
सी.एस.आई.आर.-सी.आई.एम.एफ.आर., डिगवाडीह पारिसर
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Ranchi : ☎ +91-651-2461392, Roorkee : ☎ +91-1332-275998
Website : www.cimfr.nic.in

AMBIENT AIR QUALITY DATA

Name of the Company: **Bharat Coking Coal Limited** Year : **2022-23**

Name of the Cluster : **Cluster –MISC.** PERIOD: **Q. E. DECEMBER - 2022.**

Heavy Metal Analysis report of Ambient Air Quality

SAMPLE	Cadmium(Cd) (µg/m ³)	Mercury(Hg) (µg/m ³)	Arsenic(As) (ng/m ³)	Chromium(Cr) (µg/m ³)	Nickel (Ni) (ng/m ³)	Lead (Pb) (µg/m ³)
LDL	0.001	0.001	0.005	0.01	0.1	0.005
Bhojudih Washery (A34):	<0.001	0.012	<0.005	0.03	<0.1	0.127
Dugda Washery (A35):	<0.001	<0.001	<0.005	<0.01	<0.1	0.039
Mahuda Washery (A36):	<0.001	<0.001	<0.005	0.01	<0.1	0.056
Sinidih Workshop (A38):	<0.001	<0.001	<0.005	<0.01	<0.1	0.086
Patherdih (A39):	<0.001	<0.001	<0.005	<0.01	<0.1	0.038
Koyla Nagar(A40)	<0.001	<0.001	<0.005	<0.01	<0.1	0.017
Santaldih Basti (Bhojudih wahery buffer)(A45	<0.001	<0.001	<0.005	<0.01	<0.1	0.052
Central Hospital Dhanbad (A46):	<0.001	<0.001	<0.005	<0.01	<0.1	0.044

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



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AL MINE PLANNING AND DESIGN INSTITUTE LIMITED
Environment Laboratory, Regional Institute-II
Ambient Air Quality Test Report

CMPDIL, RI-II
KOYLA BHAWAN COMPLEX
DHANBAD. -826005
Phone:0326-223-850
email: rdri2cmpdi@coalindia.in

Test Report for Ambient Air Samples

Month & Year		10/2022	Cluster	Misc.			Report No.	RI-II/AIR/2022-23/07	
Customer		Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)						Date of Issue	
Project				Sample Ref. No.	REM/BCCL/2022/10/39		Sampling Method	CMPDI/RI-II/LPM 13 , (IS 5182)	
Sampling Stations		i	Pathadih Washery :Industrial Area		Date of Sampling	08.10.22	26.10.22	Zone of Station:	CORE ZONE
Sl. No.	Parameter	Method of Analysis	Observed Values (in $\mu\text{g}/\text{m}^3$)		Range Of Testing	LDL	MoEF Standards Notification dated 25th September,2000 (GSR 742 E)	NAAQS, 2009	
			1st FN	2nd FN					
1	PM ₁₀	IS -5182(Part 23):2006, R-2017	123	97	10 $\mu\text{g}/\text{m}^3$ - 1000 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	300	100	
2	PM _{2.5}	IS -5182(Part 24):2019	68	55	10 $\mu\text{g}/\text{m}^3$ - 400 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	Not Specified	60	
3	SO ₂	IS-5182(Part-2): 2001 , R-2017	<10	<10	10 $\mu\text{g}/\text{m}^3$ - 1050 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	120	80	
4	NO ₂	IS-5182 (Part-6): 2006 , R-2017	22	24	06 $\mu\text{g}/\text{m}^3$ - 420 $\mu\text{g}/\text{m}^3$	06 $\mu\text{g}/\text{m}^3$	120	80	

****All units are in $\mu\text{g}/\text{m}^3$, 24 hourly Average, * LDL indicates Lower Detection Limit,**

[Signature]
ANALYSED BY

[Signature]
(Gaurav Kant)
CHECKED BY

[Signature]
(Amit Raj Mishra)
HOD's Signature

Note: The results above relate to the samples tested as received. This report can not be reproduced in part or full without the written permission of the HOD(Env) , CMPDI, RI-II.

---- End of Report ----

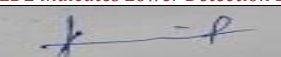
Page -1 of 1

  cmpdi <i>A Mini Ratna Company</i> CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED Environment Laboratory, Regional Institute-II Ambient Noise Level Test Report CMPDI, RI-II KOYLA BHAWAN COMPLEX DHANBAD. -826005 Phone:0326-223-850										
Month & Year	10/2022	Cluster	Washeries	Report No.	RI-II/NOISE/2022-23/07					
Customer	Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)									
Project		Sample Ref. No.	REM/BCCL/NOISE/2022/10/39			Sampling Method	CMPDI/RI-II/LPM 13			
Sampling Stations	i	Pathardih Washery		Date of Sampling	08.10.22	26.10.22	Zone Category of Station:	CORE ZONE		
Sl. No.	Parameter	Hour / Time of day	Observed Values (in Leq dB(A)) First Fortnight	Observed Values (in Leq dB(A)) Second Fortnight	Method of Analysis	Range Of Testing	LDL	NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 Standards		
								Zones	Limits in dB	
1	Noise Level dB(A)Leq - Day	06:00 - 07:00	46.9	44.0	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	75 65 55 50	
2		07:00 - 08:00	49.4	46.3						
3		08:00 - 09:00	52.3	48.5						
4		09:00 - 10:00	57.5	53.9						
5		10:00 - 11:00	58.8	55.2						
6		11:00 - 12:00	57.5	53.9						
7		12:00 - 13:00	60.2	56.5						
8		13:00 - 14:00	61.5	57.7						
9		14:00 - 15:00	62.3	52.6						
10		15:00 - 16:00	55.2	51.8						
11		16:00 - 17:00	54.7	51.3						
12		17:00 - 18:00	50.8	52.5						
13		18:00 - 19:00	50.1	51.8						
14		19:00 - 20:00	49.2	50.8						
15		20:00 - 21:00	49.2	50.4						
16		21:00 - 22:00	48.7	50.3						
		Leq Day	56.7	52.9						
1	Noise Level dB(A)Leq -Night	22:00-23:00	46.9	43.2	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	70 55 45 50	
2		23:00- 00:00	44.5	42.5						
3		00:00- 01:00	43.3	38.2						
4		01:00-02:00	40.6	36.3						
5		02:00-03:00	41.2	37.0						
6		03:00-04:00	40.3	38.4						
7		04:00-05:00	44.1	39.4						
8		05:00-06:00	44.9	39.1						
		Leq Night	43.8	39.9						

**All noise measurements are integrated for a 01 hour period, All units in dB(A) *LDL indicates Lower Detection Limit

Sampling Assistants
ANALYSED BY


 (Gaurav Kant)
CHECKED BY


 (Amit Raj Mishra)
HOD's Signature

Note: The results above relate to the samples tested as received. This report can not be reproduced in part or full without the written permission of the HOD(Env) , CMPDI, RI-II.

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Environment Laboratory, Regional Institute-II
Ambient Air Quality Test Report

CMPDIL, RI-II
KOYLA BHAWAN COMPLEX
DHANBAD. -826005
Phone:0326-223-850
email: rdri2cmpdi@coalindia.in

Test Report for Ambient Air Samples

Month & Year		11/2022	Cluster	Misc.			Report No.		RI-II/AIR/2022-23/08					
Customer		Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)						Date of Issue		22.02.2023				
Project				Sample Ref. No.	REM/BCCL/2022/39		Sampling Method		CMPDI/RI-II/LPM 13 , (IS 5182)					
Sampling Stations		i	Pathadih Washery :Industrial Area		Date of Sampling		15.11.2022		29.11.2022		Zone of Station:		CORE ZONE	
Sl. No.	Parameter	Method of Analysis	Observed Values (in $\mu\text{g}/\text{m}^3$)		Range Of Testing	LDL	MoEF Standards Notification dated 25th September,2000 (GSR 742 E)		NAAQS, 2009					
			1st FN	2nd FN										
1	PM ₁₀	IS -5182(Part 23):2006, R-2017	128	98	10 $\mu\text{g}/\text{m}^3$ - 1000 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	300		100					
2	PM _{2.5}	IS -5182(Part 24):2019	67	56	10 $\mu\text{g}/\text{m}^3$ - 400 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	Not Specified		60					
3	SO ₂	IS-5182(Part-2): 2001 , R-2017	11	<10	10 $\mu\text{g}/\text{m}^3$ - 1050 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	120		80					
4	NO ₂	IS-5182 (Part-6): 2006 , R-2017	25	24	06 $\mu\text{g}/\text{m}^3$ - 420 $\mu\text{g}/\text{m}^3$	06 $\mu\text{g}/\text{m}^3$	120		80					

****All units are in $\mu\text{g}/\text{m}^3$, 24 hourly Average, * LDL indicates Lower Detection Limit,**

(Signature)
ANALYSED BY

(Signature)
(Gaurav Kant)
CHECKED BY

(Signature)
(Amit Raj Mishra)
HOD's Signature

Note: The results above relate to the samples tested as received. This report can not be reproduced in part or full without the written permission of the HOD(Env) , CMPDI, RI-II.

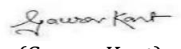
---- End of Report ----

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  cmpdi <i>A Mini Ratna Company</i> CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED Environment Laboratory, Regional Institute-II Ambient Noise Level Test Report CMPDIL, RI-II KOYLA BHAWAN COMPLEX DHANBAD. -826005 Phone:0326-223-850									
Month & Year	11/2022	Cluster	Washeries	Report No.	RI-II/NOISE/2022-23/08				
Customer	Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)				Date of Issue	22.02.2023			
Project		Sample Ref. No.	REM/BCCL/2022/39			Sampling Method	CMPDI/RI-II/LPM 13		
Sampling Stations	i	Pathardih Washery		Date of Sampling	15.11.2022	29.11.2022	Zone Category of Station:	CORE ZONE	
Sl. No.	Parameter	Hour / Time of day	Observed Values (in Leq dB(A)) First Fortnight	Observed Values (in Leq dB(A)) Second Fortnight	Method of Analysis	Range Of Testing	LDL	NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 Standards	
								Zones	Limits in dB
1	Noise Level dB(A)Leq - Day	06:00 - 07:00	57.4	56.8	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	75 65 55 50
2		07:00 - 08:00	57.4	56.2					
3		08:00 - 09:00	57.8	57.4					
4		09:00 - 10:00	58	51.8					
5		10:00 - 11:00	58	57.3					
6		11:00 - 12:00	58.1	58.0					
7		12:00 - 13:00	58.1	58.1					
8		13:00 - 14:00	57.4	58.1					
9		14:00 - 15:00	57.5	57.4					
10		15:00 - 16:00	56.9	55.6					
11		16:00 - 17:00	55.9	54.1					
12		17:00 - 18:00	57.8	51.2					
13		18:00 - 19:00	57.8	53.9					
14		19:00 - 20:00	57.8	54.2					
15		20:00 - 21:00	57.5	55.0					
16		21:00 - 22:00	57.0	51.0					
		Leq Day	57.6	56.0					
1	Noise Level dB(A)Leq -Night	22:00-23:00	54.5	56.0	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	70 55 45 50
2		23:00- 00:00	53.6	55.4					
3		00:00- 01:00	53.2	52.8					
4		01:00-02:00	54.0	53.0					
5		02:00-03:00	53.2	52.0					
6		03:00-04:00	50.4	50.3					
7		04:00-05:00	50.0	50.9					
8		05:00-06:00	52.9	53.1					
		Leq Night	50.0	50.3					

**All noise measurements are integrated for a 01 hour period, All units in dB(A) *LDL indicates Lower Detection Limit

Sampling Assistants
ANALYSED BY


 (Gaurav Kant)
CHECKED BY


 (Amit Raj Mishra)
HOD's Signature

Note: The results above relate to the samples tested as received. This report can not be reproduced in part or full without the written permission of the HOD(Env) , CMPDI, RI-II.

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AL MINE PLANNING AND DESIGN INSTITUTE LIMITED
Environment Laboratory, Regional Institute-II
Ambient Air Quality Test Report

CMPDIL, RI-II
KOYLA BHAWAN COMPLEX
DHANBAD. -826005
Phone:0326-223-850
email: rdri2cmpdi@coalindia.in

Test Report for Ambient Air Samples

Month & Year		12/2022	Cluster	Misc.			Report No.		RI-II/AIR/2022-23/09					
Customer		Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)						Date of Issue		13.03.2023				
Project				Sample Ref. No.	REM/BCCL/2022/39		Sampling Method		CMPDI/RI-II/LPM 13 , (IS 5182)					
Sampling Stations		i	Pathadih Washery :Industrial Area		Date of Sampling		09.12.22		21.12.22		Zone of Station:		CORE ZONE	
Sl. No.	Parameter	Method of Analysis	Observed Values (in $\mu\text{g}/\text{m}^3$)		Range Of Testing	LDL	MoEF Standards Notification dated 25th September,2000 (GSR 742 E)		NAAQS, 2009					
			1st FN	2nd FN										
1	PM ₁₀	IS -5182(Part 23):2006, R-2017	149	121	10 $\mu\text{g}/\text{m}^3$ - 1000 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	300		100					
2	PM _{2.5}	IS -5182(Part 24):2019	72	64	10 $\mu\text{g}/\text{m}^3$ - 400 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	Not Specified		60					
3	SO ₂	IS-5182(Part-2): 2001 , R-2017	<10	<10	10 $\mu\text{g}/\text{m}^3$ - 1050 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	120		80					
4	NO ₂	IS-5182 (Part-6): 2006 , R-2017	22	21	06 $\mu\text{g}/\text{m}^3$ - 420 $\mu\text{g}/\text{m}^3$	06 $\mu\text{g}/\text{m}^3$	120		80					

****All units are in $\mu\text{g}/\text{m}^3$, 24 hourly Average, * LDL indicates Lower Detection Limit,**

(Signature)
ANALYSED BY

(Signature)
(Gaurav Kant)
CHECKED BY

(Signature)
(Amit Raj Mishra)
HOD's Signature

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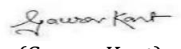
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  cmpdi <i>A Mini Ratna Company</i> CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED Environment Laboratory, Regional Institute-II Ambient Noise Level Test Report CMPDIL, RI-II KOYLA BHAWAN COMPLEX DHANBAD. -826005 Phone:0326-223-850										
Month & Year	11/2022	Cluster	Washeries	Report No.	RI-II/NOISE/2022-23/08					
Customer	Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)								Date of Issue	22.02.2023
Project		Sample Ref. No.	REM/BCCL/2022/39			Sampling Method	CMPDI/RI-II/LPM 13			
Sampling Stations	i	Pathardih Washery		Date of Sampling	15.11.2022	29.11.2022	Zone Category of Station:	CORE ZONE		
Sl. No.	Parameter	Hour / Time of day	Observed Values (in Leq dB(A)) First Fortnight	Observed Values (in Leq dB(A)) Second Fortnight	Method of Analysis	Range Of Testing	LDL	NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 Standards		
								Zones	Limits in dB	
1	Noise Level dB(A)Leq - Day	06:00 - 07:00	57.4	56.8	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	75 65 55 50	
2		07:00 - 08:00	57.4	56.2						
3		08:00 - 09:00	57.8	57.4						
4		09:00 - 10:00	58	51.8						
5		10:00 - 11:00	58	57.3						
6		11:00 - 12:00	58.1	58.0						
7		12:00 - 13:00	58.1	58.1						
8		13:00 - 14:00	57.4	58.1						
9		14:00 - 15:00	57.5	57.4						
10		15:00 - 16:00	56.9	55.6						
11		16:00 - 17:00	55.9	54.1						
12		17:00 - 18:00	57.8	51.2						
13		18:00 - 19:00	57.8	53.9						
14		19:00 - 20:00	57.8	54.2						
15		20:00 - 21:00	57.5	55.0						
16		21:00 - 22:00	57.0	51.0						
		Leq Day	57.6	56.0						
1	Noise Level dB(A)Leq -Night	22:00-23:00	54.5	56.0	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	70 55 45 50	
2		23:00- 00:00	53.6	55.4						
3		00:00- 01:00	53.2	52.8						
4		01:00-02:00	54.0	53.0						
5		02:00-03:00	53.2	52.0						
6		03:00-04:00	50.4	50.3						
7		04:00-05:00	50.0	50.9						
8		05:00-06:00	52.9	53.1						
		Leq Night	50.0	50.3						

**All noise measurements are integrated for a 01 hour period, All units in dB(A) *LDL indicates Lower Detection Limit

Sampling Assistants
ANALYSED BY


 (Gaurav Kant)
CHECKED BY


 (Amit Raj Mishra)
HOD's Signature

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AL MINE PLANNING AND DESIGN INSTITUTE LIMITED
Environment Laboratory, Regional Institute-II
Ambient Air Quality Test Report

CMPDIL, RI-II
KOYLA BHAWAN COMPLEX
DHANBAD. -826005
Phone:0326-223-850
email: rdri2cmpdi@coalindia.in

Test Report for Ambient Air Samples

Month & Year		01/2023	Cluster	Misc.			Report No.		RI-II/AIR/2022-23/10					
Customer		Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)						Date of Issue		23.03.2023				
Project				Sample Ref. No.	REM/BCCL/2023/10		Sampling Method		CMPDI/RI-II/LPM 13 , (IS 5182)					
Sampling Stations		i	Pathadih Washery :Industrial Area		Date of Sampling		12.01.2023		17.01.2023		Zone of Station:		CORE ZONE	
Sl. No.	Parameter	Method of Analysis	Observed Values (in $\mu\text{g}/\text{m}^3$)		Range Of Testing	LDL	MoEF Standards Notification dated 25th September,2000 (GSR 742 E)		NAAQS, 2009					
			1st FN	2nd FN										
1	PM ₁₀	IS -5182(Part 23):2006, R-2017	124	112	10 $\mu\text{g}/\text{m}^3$ - 1000 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	300		100					
2	PM _{2.5}	IS -5182(Part 24):2019	69	61	10 $\mu\text{g}/\text{m}^3$ - 400 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	Not Specified		60					
3	SO ₂	IS-5182(Part-2): 2001 , R-2017	<10	<10	10 $\mu\text{g}/\text{m}^3$ - 1050 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$	120sss		80					
4	NO ₂	IS-5182 (Part-6): 2006 , R-2017	29	25	06 $\mu\text{g}/\text{m}^3$ - 420 $\mu\text{g}/\text{m}^3$	06 $\mu\text{g}/\text{m}^3$	120		80					

****All units are in $\mu\text{g}/\text{m}^3$, 24 hourly Average, * LDL indicates Lower Detection Limit,**

[Signature]

ANALYSED BY

[Signature]

(Gaurav Kant)
CHECKED BY

[Signature]

(Amit Raj Mishra)
HOD's Signature

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Month & Year	01/2023	Cluster	Washeries	Report No.	RI-II/NOISE/2022-23/10				
Customer	Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)				Date of Issue	23.03.2023			
Project		Sample Ref. No.	REM/BCCL/2023/10		Sampling Method	CMPDI/RI-II/LPM 13			
Sampling Stations	i	Pathardih Washery	Date of Sampling	12.01.2023	17.01.2023	Zone Category of Station:	CORE ZONE		
Sl. No.	Parameter	Hour / Time of day	Observed Values (in Leq dB(A)) First Fortnight	Observed Values (in Leq dB(A)) Second Fortnight	Method of Analysis	Range Of Testing	LDL	NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 Standards	
								Zones	Limits in dB
1	Noise Level dB(A)Leq - Day	06:00 - 07:00	45.6	46.1	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	75 65 55 50
2		07:00 - 08:00	48.1	52.5					
3		08:00 - 09:00	49.2	53.7					
4		09:00 - 10:00	50.0	48.5					
5		10:00 - 11:00	50.8	53.6					
6		11:00 - 12:00	54.3	54.2					
7		12:00 - 13:00	54.3	54.3					
8		13:00 - 14:00	53.7	54.3					
9		14:00 - 15:00	53.8	53.7					
10		15:00 - 16:00	53.2	52.0					
11		16:00 - 17:00	52.2	50.6					
12		17:00 - 18:00	52.0	47.9					
13		18:00 - 19:00	51.6	50.4					
14		19:00 - 20:00	51.2	50.7					
15		20:00 - 21:00	50.0	51.5					
16		21:00 - 22:00	50.1	51.2					
		Leq Day	51.8	52.1					
1	Noise Level dB(A)Leq -Night	22:00-23:00	42.6	42.8	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	70 55 45 50
2		23:00- 00:00	41.6	41.9					
3		00:00- 01:00	41.3	41.9					
4		01:00-02:00	41.1	41.3					
5		02:00-03:00	40.8	41.9					
6		03:00-04:00	40.6	40.8					
7		04:00-05:00	40.2	40.8					
8		05:00-06:00	39.8	41.2					
		Leq Night	41.1	41.6					

**All noise measurements are integrated for a 01 hour period, All units in dB(A) *LDL indicates Lower Detection Limit

Sampling Assistants
ANALYSED BY


(Gaurav Kant)
CHECKED BY


(Amit Raj Mishra)
HOD's Signature

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CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED
Environment Laboratory, Regional Institute-II
Ambient Air Quality Test Report

CMPDIL, RI-II
KOYLA BHAWAN COMPLEX
DHANBAD. -826005
Phone:0326-223-850
email: rdri2cmpdi@coalindia.in

Test Report for Ambient Air Samples

Month & Year		02/2023	Cluster	Misc.			Report No.	RI-II/AIR/2022-23/11
Customer		Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)					Date of Issue	31.03.2023
Project		Pathadih Washery :Industrial Area	Sample Ref. No.	REM/BCCL/2023/11	Sampling Method		CMPDI/RI-II/LPM 13 , (IS 5182)	
Date of Sampling		03-02-2023	27-02-2023	Period of Analysis	01.03.2023	15.03.2023	Zone of Station:	CORE ZONE
Sl. No.	Parameter	Method of Analysis	Observed Values (in µg/m³)		Range Of Testing	LDL	MoEF Standards Notification dated 25th September,2000 (GSR 742 E)	NAAQS, 2009
			1st FN	2nd FN				
1	PM ₁₀	IS -5182(Part 23):2006, R-2017	116	142	10 µg/m³ - 1000 µg/m³	10 µg/m³	300	100
2	PM _{2.5}	IS -5182(Part 24):2019	64	71	10 µg/m³ - 400 µg/m³	10 µg/m³	Not Specified	60
3	SO ₂	IS-5182(Part-2): 2001 , R-2017	<10	<10	10 µg/m³ - 1050 µg/m³	10 µg/m³	120sss	80
4	NO ₂	IS-5182 (Part-6): 2006 , R-2017	25	22	06 µg/m³ - 420 µg/m³	06 µg/m³	120	80

****All units are in $\mu\text{g}/\text{m}^3$, 24 hourly Average, * LDL indicates Lower Detection Limit,**

Anil Kumar
[Signature]

ANALYSED BY

Gaurav Kant

(Gaurav Kant)
REVIEWED BY

[Signature]

(Amit Raj Mishra)
Authorised Signatory

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Month & Year	02/2023	Cluster		Misc.		Report No.	RI-II/NOISE/2022-23/11		
Customer	Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)					Date of Issue	31.03.2023		
Project		Sample Ref. No.	REM/BCCL/2023/11			Sampling Method	CMPDI/RI-II/LPM 13		
Sampling Stations	i	Pathardih Washery		Date of Sampling	03-02-2023	27-02-2023	Zone Category of Station:	CORE ZONE	
Sl. No.	Parameter	Hour / Time of day	Observed Values (in Leq dB(A)) First Fortnight	Observed Values (in Leq dB(A)) Second Fortnight	Method of Analysis	Range Of Testing	LDL	NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 Standards	
								Zones	Limits in dB
1	Noise Level dB(A)Leq - Day	06:00 - 07:00	45.1	45.6	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	75 65 55 50
2		07:00 - 08:00	47.6	52					
3		08:00 - 09:00	48.7	53.1					
4		09:00 - 10:00	49.5	48					
5		10:00 - 11:00	50.3	53					
6		11:00 - 12:00	53.7	53.6					
7		12:00 - 13:00	53.7	53.7					
8		13:00 - 14:00	53.1	53.7					
9		14:00 - 15:00	53.2	53.1					
10		15:00 - 16:00	52.7	51.5					
11		16:00 - 17:00	51.7	50.1					
12		17:00 - 18:00	51.5	47.4					
13		18:00 - 19:00	51.1	49.9					
14		19:00 - 20:00	50.7	50.2					
15		20:00 - 21:00	49.5	51					
16		21:00 - 22:00	49.6	50.7					
		Leq Day	51.3	51.6					
1	Noise Level dB(A)Leq -Night	22:00-23:00	49.9	50.1	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	70 55 45 50
2		23:00- 00:00	48.7	49					
3		00:00- 01:00	48.4	49					
4		01:00-02:00	48.1	48.4					
5		02:00-03:00	47.8	49					
6		03:00-04:00	47.5	47.7					
7		04:00-05:00	47.1	47.7					
8		05:00-06:00	48	48.4					
		Leq Night	48.3	48.7					

**All noise measurements are integrated for a 01 hour period, All units in dB(A) *LDL indicates Lower Detection Limit

Sampling Assistants
ANALYSED BY


(Gaurav Kant)
REVIEWED BY


(Amit Raj Mishra)
Authorised Signatory

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CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED
Environment Laboratory, Regional Institute-II
Ambient Air Quality Test Report

CMPDIL, RI-II
KOYLA BHAWAN COMPLEX
DHANBAD. -826005
Phone:0326-223-850
email: rdri2cmpdi@coalindia.in

Test Report for Ambient Air Samples

Month & Year		03/2023	Cluster	Misc.			Report No.		RI-II/AIR/2022-23/12		
Customer		Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)						Date of Issue		29.04.2023	
Project		Pathadih Washery :Industrial Area		Sample Ref. No.	REM/BCCL/2023/12		Sampling Method		CMPDI/RI-II/LPM 13 , (IS 5182)		
Date of Sampling		03.03.23		29.03.23	Period of Analysis		01.03.2023	10.04.2023	Zone of Station:		CORE ZONE
Sl. No.	Parameter	Method of Analysis	Observed Values (in µg/m³)		Range Of Testing	LDL	MoEF Standards Notification dated 25th September,2000 (GSR 742 E)	NAAQS, 2009			
			1st FN	2nd FN							
1	PM ₁₀	IS -5182(Part 23):2006, R-2017	110	98	10 µg/m³ - 1000 µg/m³	10 µg/m³	300	100			
2	PM _{2.5}	IS -5182(Part 24):2019	63	57	10 µg/m³ - 400 µg/m³	10 µg/m³	Not Specified	60			
3	SO ₂	IS-5182(Part-2): 2001 , R-2017	<10	<10	10 µg/m³ - 1050 µg/m³	10 µg/m³	120sss	80			
4	NO ₂	IS-5182 (Part-6): 2006 , R-2017	20	21	06 µg/m³ - 420 µg/m³	06 µg/m³	120	80			

***All units are in $\mu\text{g}/\text{m}^3$, 24 hourly Average, * LDL indicates Lower Detection Limit,*

Anil Kumar
[Signature]

ANALYSED BY

Gaurav Kant

(Gaurav Kant)
REVIEWED BY

[Signature]

(Amit Raj Mishra)
Authorised Signatory

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  cmpdi <i>A Mini Ratna Company</i> CENTRAL MINE PLANNING AND DESIGN INSTITUTE LIMITED Environment Laboratory, Regional Institute-II Ambient Noise Level Test Report CMPDIL, RI-II KOYLA BHAWAN COMPLEX DHANBAD. -826005 Phone:0326-223-850									
Month & Year	03/2023	Cluster		Misc.		Report No.	RI-II/NOISE/2022-23/12		
Customer	Environment Department, Bharat Coking Coal Limited (BCCL), Koyla Bhawan, Dhanbad (E-mail: gmenv.bccl@coalindia.in)					Date of Issue	29.04.2023		
Project		Sample Ref. No.	REM/BCCL/2023/12			Sampling Method	CMPDI/RI-II/LPM 13		
Sampling Stations	i	Pathardih Washery		Date of Sampling	03.03.23	29.03.23	Zone Category of Station:	CORE ZONE	
Sl. No.	Parameter	Hour / Time of day	Observed Values (in Leq dB(A)) First Fortnight	Observed Values (in Leq dB(A)) Second Fortnight	Method of Analysis	Range Of Testing	LDL	NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 Standards	
								Zones	Limits in dB
1	Noise Level dB(A)Leq - Day	06:00 - 07:00	48.3	48.8	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	75 65 55 50
2		07:00 - 08:00	50.9	55.6					
3		08:00 - 09:00	52.1	56.9					
4		09:00 - 10:00	52.9	51.3					
5		10:00 - 11:00	53.8	56.7					
6		11:00 - 12:00	57.5	57.4					
7		12:00 - 13:00	57.5	57.5					
8		13:00 - 14:00	56.9	57.5					
9		14:00 - 15:00	57	56.9					
10		15:00 - 16:00	56.3	55.1					
11		16:00 - 17:00	55.3	53.6					
12		17:00 - 18:00	55.1	50.7					
13		18:00 - 19:00	54.6	53.4					
14		19:00 - 20:00	54.2	53.7					
15		20:00 - 21:00	52.9	54.5					
16		21:00 - 22:00	53	54.2					
		Leq Day	54.9	55.3					
1	Noise Level dB(A)Leq -Night	22:00-23:00	47.9	48.1	CPCB, Protocol for Ambient Level Noise Monitoring -2015	35 dB- 135 dB	35 dB(A)	Industrial Commercial Residential Silence	70 55 45 50
2		23:00- 00:00	46.8	47.1					
3		00:00- 01:00	46.5	47.1					
4		01:00-02:00	46.2	46.5					
5		02:00-03:00	45.9	47.1					
6		03:00-04:00	45.6	45.8					
7		04:00-05:00	45.3	45.8					
8		05:00-06:00	46.1	46.5					
		Leq Night	46.4	46.8					

**All noise measurements are integrated for a 01 hour period, All units in dB(A) *LDL indicates Lower Detection Limit

Sampling Assistants
ANALYSED BY


(Gaurav Kant)
REVIEWED BY


(Amit Raj Mishra)
Authorised Signatory

Note: The results above relate to the samples tested as received. This report can not be reproduced in part or full without the written permission of the HOD(Env) , CMPDI, RI-II.

----- End of Report -----

Page -1 of 1



BHARAT COKING COAL LTD.
A MINI RATNA COMPANY
(A Subsidiary of Coal India Limited)
Office of the Project Officer (5.0 MTPA Patherdih NLW)
P.O.Patherdih, Dist. Dhanbad
(Jharkhand)
Email:-nlwpatherdihbccl@gmail.com

Ref: No. BCCL/NLW PCW/2022/ 1054

Dated: 10/10/2022

To
Dhanbad Municipal Corporation,
Luby Circular Road, Dhanbad- 826001

Sub:- Copy Environmental Clearance to 5.0 MTPA NLW Patherdih Coal Washery.

Dear Sir/ Madam,

Please find enclosed copy of Environmental Clearance granted to 5.0 MTPA NLW Patherdih Coal Washery having Ref. no. J-11015/240/2010-IA.II (M), Dated with 25-01-2012. Issued by Director (MoEF & CC).

Thinking you

Yours Faithfully

(Dae Singh) 10.10.2022

Project Officer

5.0 MTPA Patherdih NLW Washery

Receipt

Babita Gopin
श्रीमति बाबिता गारादे 10.10.2022
पार्षद
गार्ड संख्या-49
धनबाद नगर निगम

Ministry of Environment & Forests

Paryavaran Bhawan,
C.G.O. Complex, Lodi Road
New Delhi -110003.

No. J-11015/240/2010-1A.II (M)

To

Dated: 25th January 2012

Director (P&P),
M/s Bharat Coking Coal Ltd,
Koyla Bhawan, Dhanbad.

Sub: Patherdih NLW Coal Washery (5 MTPA normative with a peak capacity of 6.5 MTPA in an area of 12 ha) of M/s Bharat Coking Coal Ltd. located in Jharia Coalfields, in district Dhanbad, Jharkhand - Environmental Clearance - reg.
Sir.

This has reference to letter No. 43011/25/2010-CPAM dated 01.07.2010 of Ministry of Coal along with application for Terms of Reference (TOR) and this Ministry's grant of TOR vide letter dated 23.09.2010 and application for environmental clearance vide letter No. CIL/DLI/EMP-TOR/2011/08 dated 13.09.2011 and letter dated 19.11.2011 on the above-mentioned subject. The Ministry of Environment & Forests has considered the application. The proposed is for **establishing a new Patherdih Coking Coal Washery**, which is a non-linked washery (NLW) of a capacity of 5 million tonnes per annum (MTPA) and 6.5 MTPA (peak) in an area of 12 ha in Jharia Coalfields, identified as a critically polluted area. The washery is a 3-product coal washery using Jig and HM Cyclone Technology. The washery is being sited in total area of 12 ha land which is a non-coal bearing area. No forestland is involved. The site has been chosen keeping in view the existing railway line available for transportation of raw coal from 3 collieries, namely N/S Tisra OCP, Goluckdih OCP (NC), Ganoodih OCP and Rajapur OCP located at a distance of 5-7 km from the washery and for despatch of washed coal and middling to be sent to powerhouses in Durgapur and Bokaro.

S.N.	Name of the Linked Mine	Capacity (MTPA)	Reserve Capacity (MT)	Life of mine (in Years)

1.	N/S Tisra OCP	2.1	13.9	6.6
2.	Goluckdih OCP	1.0	22.85	22.85
3.	Ghanoodih OCP	1.3	4.3	3.3
4.	Rajapur OCP	0.75	18.0	24
	TOTAL	5.15	59.05	

Raw coal (5 MTPA) has an ash content of 41.1% would yield 1.12 MTPA of clean (washed) coal of an ash content of 18.1% would be used in steel plants at Durgapur, Bokaro and Rourkela and power grade coal (2.58 MTPA) with an ash content of 39.93% for use in thermal coal for power generation in TPPs and coal rejects of 1.3 MTPA of > 60% ash content would be utilised in an FBC based Thermal Power Plant. The Company has called for an open tender for use of the coal rejects in an FBC based TPP. The water requirement of the plant (make-up water) is 0.5 MGD and would be obtained from old abandoned mines near the washery. The washery will be provided with a Filter Press and Thickener to extract the water from the slurry. Transportation of raw coal would be by road and washed coal from the washery would be by rail from railway siding located within the premises. The entire clean coal and coal rejects would be from the washery by closed conveyors to adjoining Railway Siding by Rapid Loading system consisting of hopper and surge bunker and thereafter transported by rail mode only. In addition, the entire flyash generated from the FBC based TPP would be utilised by cement units in clinker production/ flyash brick unit. A provision of Rs 2 cores and Rs 5/T of coal for recurring expenditure has been made for activities under CSR. CSR activities would cover education, water supply, health care, social empowerment, infrastructure development i.e. road, water supply, electricity and a community centre. A full time Monitoring Cell is proposed to be constituted. Life of the washery is about 18 years. Public Hearing was held on 02.06.2011. Capital cost of the project is Rs 157.50 crores.

2.0 The Ministry of Environment & Forests hereby accords environmental clearance for the establishment of the above-mentioned **Patherdih NLW Coking Coal Washery of 5million tonnes per annum (MTPA) capacity with a peak capacity of 6.5 MTPA in an area of 12ha of M/s Bharat Coking Coal Ltd.** under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and under Circulars there under and subject to conditions specified below:

Specific Conditions

(i) The capacity of the washery shall not exceed 6.5 MTPA without prior environmental clearance from this Ministry.

(ii) Transport of raw coal from the identified mines of the company, washed coal from the washery to the steel plants in Durgapur, Bhilai and Bokaro and middling to TPPs and coal rejects to FBC based TPP shall be by rail mode only from the railway siding located within the premises.

(iii) The entire coal rejects from the washery shall be fully utilised in an FBC based TPP for which open tender for operation of the FBC based TPP has been called by the proponent. The FBC based TPPs shall be preferably located in or near Jharia coalfields. The Company shall enter into a long-term MOU for utilisation of the coal rejects from the washery within 3 months and also for utilisation of flyash generated from the FBC based TPP with a suitable company.

(iv) As the washery is located in Jharia Coalfields, which forms a part of the Critically Polluted Area of Dhanbad, the company shall implement the mitigative measures outlined in the Environmental Action Plan for CPA-Dhanbad applicable to the project, which would be in conformity with the Environmental Action Plan prepared for Dhanbad Area to keep the levels of air quality parameters well within limits. The proponent shall implement mitigative measures such as providing water sprinkling arrangements at various transfer points and loading/unloading points, regular maintenance of vehicles used for coal transportation, periodic and regular checking of vehicles for source emission, main approach roads used for transportation of raw coal to be black topped, monitoring for particulate matter (PM₁₀ and PM_{2.5}) and maintenance of records thereof, bag filter at suitable locations of the washery, wind shelters/wind breaks in coal stockyards (raw coal, clean coal and coal rejects), providing 3-tier green belt with native species.

(v) The proponent shall implement a plan to regularly dredge River Damodar 0.5 km upstream and 1km length downstream of the washery free of sludge, coal fines and silt which has accumulated in the river over a period of time and dispose the wastes in an environmentally friendly manner, in consultation with the Jharkhand State Pollution Control Board.

(vi) The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site(s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored raw coal, washed coal and coal wastes do not catch fire.

(vii) Hoppers of the coal crushing unit and washery unit shall be fitted with high efficiency bag filters and mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.

(viii) All approach roads shall be black topped and all internal roads shall be black topped or concreted. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using local species shall be developed along the main roads, and approach roads to the washery.

(ix) The proponent shall maintain proper records of the ash content of raw (ROM) coal, clean coal and coal rejects of every consignment received and washed and the same shall be uploaded along with quantum of raw coal obtained and washed and dispatched every month on the company's website every month.

(x) Water for the coal washery shall be met from mine water from BCCL mines. No groundwater shall be used for the washery plant operations. Any additional water requirement envisaged shall be obtained by recycle/reuse to the maximum extent and from rainwater harvesting measures. Pressure Filter and Thickener shall be installed in the washery for water recovery and reuse.

(xi) The Washery unit shall be a zero-discharge facility and no wastewater shall be discharged from the washery into the drains/natural watercourses. The Washery shall be provided with a garland drain to carry/recycle the effluents generated from the washery operations and coal fines collected shall be recovered from the slurry and concentrated and also sold for users. The wastewater from the washery shall be free of coal dust and particles and recycled for development and maintenance of green belt and in the plant operations.

(xii) A separate storm water drain to carry storm water from the washery for discharge outside the premises to nallahs/streams shall be established. The storm water drains shall be regularly desilted.

(xiii) Industrial wastewater (workshop and wastewater from the washery) 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 for treatment of workshop effluents.

(xiv) Green belt shall be developed using local species all along the periphery of the site, along the areas such as the crushing unit and stockyard, transfer and loading points.

(xv) Socio-economic and welfare measures for the local communities shall be implemented under CSR with an outlay of Rs 2 crores and Rs 5/T of coal as recurring expenditure. The village-wise activities undertaken and proposed and the expenditure thereon shall be displayed on the company website every year. A Monitoring Cell shall be established for monitoring activities undertaken under CSR.

(xvi) Levels of heavy metals such as mercury in raw coal, washed coal and rejects shall be analysed twice in a year and records maintained thereof and furnished as part of the Compliance Report to the MOEF RO, Bhubaneswar.

(xvii) 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.

B. General Conditions

(i) No change in technology and scope of working of the washery shall be made without prior approval of the Ministry of Environment and Forests.

(ii) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM_{10} , $PM_{2.5}$, SO_2 and NO_x . 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, in PM_{10} and $PM_{2.5}$ etc. shall be carried out at least once in six months.

(iii) Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EP Rules, 1986.

(iv) Data on ambient air quality (PM_{10} , $PM_{2.5}$, SO_2 and NO_x and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent

laboratories recognised under the EP Rules, 1986 shall be furnished as part of the compliance report.

(v) Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HFMM, etc shall be provided with ear plugs/muffs.

(v) 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.

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.

(vi) 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.

(vii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office Bhubaneswar.

(viii) The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at <http://envfor.nic.in>

(ix) A copy of the environmental clearance letter shall be marked to concerned Panchayat/ Zila Parishad/Municipal Corporation or Urban Local Body 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 the company's website.

(x) A copy of the clearance letter shall 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 Centre and Collector's Office/Tehsildar's Office for 30 days.

(xi) The clearance letter 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 the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM₁₀, PM_{2.5}, SO₂ and NO_x (ambient and stack if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.

(xii) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.

(xiii) The Regional Office of this Ministry located Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information monitoring reports.

(xiv) The environmental statement for each financial year ending 31st March in Form-V is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MOEF by E-mail.

3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

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

(Dr.T.Chandini)
Director

Copy to:

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrashekarapur, Bhubaneswar – 751023.
4. Chairman, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), H.E.C., Dhurwa, Ranchi – 834004.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
8. Dr.R.K.Garg, Advisor, M/s Coal India Ltd., SCOPE Minar, New Delhi.
9. District Collector, Dhanbad, Government of Jharkhand.
10. Monitoring File 11. Guard File 12. Record File.

(Dr.T.Chandini)
Director

0
EJ3234105711N IVR:6974323410571

CP PATHERDIH COAL WASHERY SO <828132>

Counter No:1,13/10/2022,15:21

To:D M C,LUBY CIRCULAR RD

PIN:826001, Dhanbad HO

From:PROJECT OFFICER,5.OMIPA PCW

Wt:30gms

Amt:41.30()Tax:6.30

<Track on www.indiapost.gov.in>

<Dial 18002666868> <Wear Masks, Stay Safe>

ANNEXURE-XI

ENVIRONMENTAL PARAMETERS DISPLAY BOARD AT 5.0 MTPA PATHERDIH NLW COAL WASHERY

5.0 - MTPA PATHERDIH NLW COAL WASHERY		
EC ORDER NO. - J-11015/240/2010 - I A. II (M) DATED : 25.01.2012		
PRODUCTION CAPACITY : 5.0 MTPA (NORM), 6.5 MTPA (PEAK)		
5.0 MTPA PATHERDIH NLW COAL WASHERY	PRODUCTION	LEASE HOLD AREA
		12 Ha
CONCENTRATION VALUES OF ENVIROMENTAL PARAMETERS MONITORED		
MONITORING AGENCY - CMPDI		
WATER PARAMETER(mg/L)	AIR PARAMETER($\mu\text{g}/\text{m}^3$)	NOICE (dB)
PH	PM ₁₀	
TSS	PM _{2.5}	
COD	NO _x	
OIL & GREASE	SO ₂	

MARCH '23
(29.03.2023)

PM₁₀ - 98
PM_{2.5} - 57
NO₂ - 21
SO_x - <10

ENVIRONMENTAL STATEMENT (FORM-V)Environmental Statement for the financial year 2021-22 ended on 31st March 2022.**PART-A****i. Name and address of the owner/occupier of the industry
Operation or process****Name:** Sri Sanjay Kumar Singh**Designation:** Director (Technical) / Operations**Address:** Koyla Bhawan, Koyla Nagar, BCCL Township, Dhanbad- 826005**Industry Category** - Primary (ORANGE Category)**ii. Production Capacity** – 5.0 MTPA (Peak Production Capacity) as per EC
Granted to 5.0- MTPA Patherdih NLW Coal Washery by MoEF&CC.**iii. Year of establishment** – 2020 (Year of Commissioning)**iv. Date of the last Environmental Statement submitted-** 10.09.2021**PART –B****Water and Raw Material Consumption****I (A) Water Consumption (In m³/d):** 235.33 m³/day

Name of Products	Water Consumption (M ³ /day)	
	Washing Operation	Domestic Supply
Washed Coal	28.24 m ³ /day	NIL
Washed Power Coal	140.2 m ³ /day	
Rejects	67.6 m ³ /day	

I (B) Process Water Consumption per unit of Product Output:

Name of Products	During the previous financial year (2020-21)	During the current financial year (2021-22)
Washed Coal	48 m ³ /te	48 m ³ /te
Washed Power Coal	9.6 m ³ /te	9.6 m ³ /te
Rejects	22.4 m ³ /te	22.4 m ³ /te

II Raw Material Consumption:

Name of Raw Materials	Name of Products	Consumption of raw material per unit of output	
		During the previous financial year	During the current financial year

ENVIRONMENTAL STATEMENT (FORM-V)Environmental Statement for the financial year 2021-22 ended on 31st March 20

Raw Coal	Washed Coal	120 Tonnes/Te	120 Tonnes/Te
Raw Coal	Washed Power Coal	620 Tonnes/Te	620 Tonnes/Te
Raw Coal	Rejects	280 Tonnes/Te	280 Tonnes/Te

PART-C**Pollution Discharged to Environment/Unit of Output**
(Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants discharged (mass/volume)	Percentage of variation from prescribed standards with reasons.
(a) Water	Washery operates under Zero Liquid Discharge.		
(b) Air	Monitoring Reports attached.		
(c) Noise	Monitoring Reports attached.		

Note: Routine Environmental Monitoring is being done by Central Mine Planning and Design Institute Limited.**PART-D****HAZARDOUS WASTES**

As specified under Hazardous Wastes (Management & Handling Rules, 2016).

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year (2020-21)	During the current financial year (2021-22)
I. From Process:		
Burnt Oil (Used/Spent Oil)	NIL	900 Ltr
2. From Pollution Control Facilities	NIL	NIL

ENVIRONMENTAL STATEMENT (FORM-V)

Environmental Statement for the financial year 2021-22 ended on 31st March 2022.

PART-E
SOLID WASTES

Solid Wastes	Total Quantity (Kg)	
	During the previous financial year (2020-21)	During the current financial year (2021-22)
a. From process	NIL	NIL
b. From Pollution Control Facility	NIL	NIL
c. Quantity recycled or re-utilized within the unit.	NIL	NIL

PART – F

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

As already mentioned in Part D of this statement, Burnt Oil (Spent Oil/Used Oil) is being generated from Operation and Maintenance of Washery. Burnt oil is disposed off to a Disposal Facility through E- auction on MSTC Portal, a Govt. Of India Undertaking.

PART-G

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

In order to carry out washery operations in ecofriendly manner the following pollution control measures have been adopted:

- Water sprinkling is being done on coal transportation road by mobile water tanker.
- Regular sprinkling of water at coal transfer and loading points as well as other dusty areas.
- Regular maintenance of plant machinery engaged in coal washing and other machines at washery is done.
- Safety equipment such as safety helmets, ear muffs, etc. are to be provided to operators and others who are exposed to high level noise.
- In addition to that, plantation is being done in undisturbed area/ transportation roads etc.

ENVIRONMENTAL STATEMENT (FORM-V)

Environmental Statement for the financial year 2021-22 ended on 31st March 20

PART – H

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

- Ambient Environmental Monitoring will be continued as per the guidelines of MoEF&CC and Jharkhand State Pollution Control Board.
- Application for consent for emission/continuation of emission under section 21 of the Air (prevention and control of pollution) Act, 1981 and Application for consent for discharge Continuation of discharge under section 25/26 of Water (Prevention and Control of Pollution) Act, 1974 will be regularly done and Conditions laid down in Consent to Operate granted by JSPCB will be strictly followed.
- Continuous Monitoring online PM₁₀ analyzer has been installed in the washery and also linked to the JSPCB Servers.
- The Conveyor Belts carrying the Raw Coal are installed with fixed sprinkling arrangements.

PART –I

MISCELLANEOUS:

Any other particulars in respect of environmental protection and abatement of pollution.

- Water sprinkling is being done on coal transportation road by mobile sprinkler or truck mounted fog cannon.
- Avenue plantation has been done along the approach roads and internal roads of the washery.
- Plantation has been done along the boundary of the Slurry Ponds of the washery.
- A Sneh Smriti Upvan has also been developed in the washery with native species.


13/09/2022
Project Officer
5.0 MTPA Patherdih NLW Washery


STRICTLY RESTRICTED**FOR COMPANY USE ONLY RESTRICTED**

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.

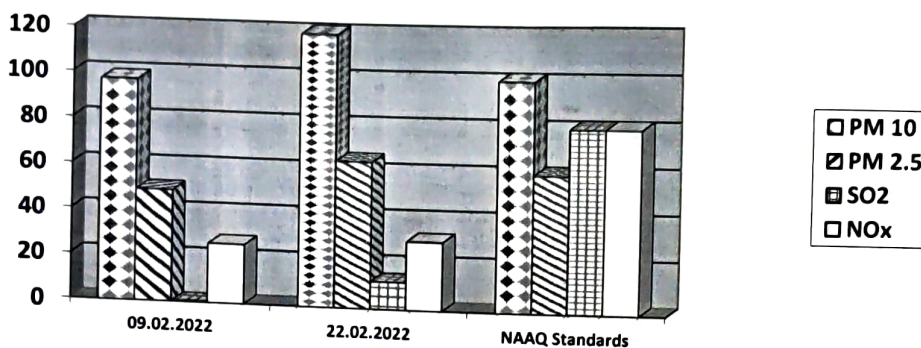
**ENVIRONMENTAL MONITORING REPORT
OF
BHARAT COKING COAL LIMITED,
FOR MISCELLANEOUS UNITS/WASHERIES
(FOR THE MONTH FEBRUARY, 2022)**



CMPDI

ISO 9001 Company
Regional Institute-II
Dhanbad, Jharkhand

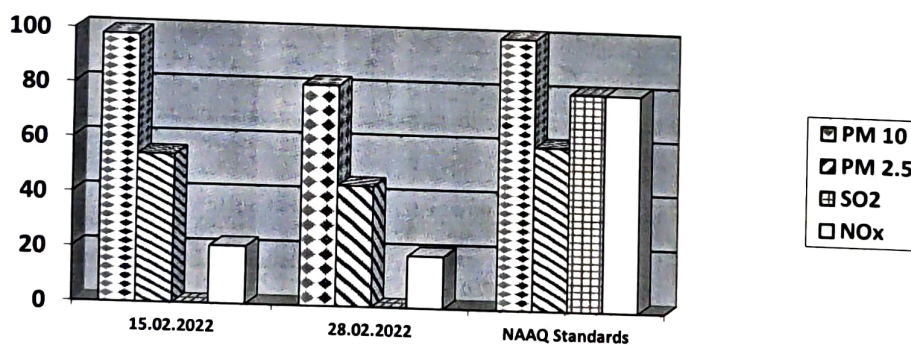
Station Name: A39Patherdih		Zone: Core		Category: Industrial	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	09.02.2022	97	49	<10	26
2	22.02.2022	119	64	12	30
	NAAQ Standards	100	60	80	80



All values are expressed in microgram per cubic meter.

Station Name: A40 Koylanagar		Zone: Buffer		Category: Residential	
Sl. No.	Dates of sampling	PM 10	PM 2.5	SO ₂	NO _x
1	15.02.2022	98	54	<10	21
2	28.02.2022	81	44	<10	19
	NAAQ Standards	100	60	80	80

➤ 24 hours duration



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

अनुसंधान केंद्र राउत

Analysed By
JSA/SA/SSA

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

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

JOB NO. 200316028

Miscellaneous, BCCL Environmental Monitoring Report

Handwritten signature

NOISE LEVEL QUALITY MONITORING

4.1 Location of sampling sites

- i) Bhojudih Washery (N34)
- ii) Dugda Washery (N35)
- iii) Mahuda Washery (N36)
- iv) Sinidih Workshop (N38)
- v) Patherdih Washery (N39)
- vi) Koylanagar Hospital (N40)

4.2 Methodology of sampling and analysis

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

4.3 Results & Interpretations

Ambient noise levels were recorded during day 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 : Miscellaneous			Month: FEB, 2022		
Sl. No.	Station Name/Code	Category of area	Date	Noise level dB(A)LEQ	*Permissible Limit of Noise level in dB(A)
1	Bhojudih Washery (N34)	Industrial area	08.02.22	57.3	75
2	Bhojudih Washery	Industrial area	22.02.22	58.2	75
3	Dugda Washery (N35)	Industrial area	07.02.22	63.6	75
4	Dugda Washery	Industrial area	21.02.22	62.6	75
5	Mahuda Washery (N36)	Industrial area	01.02.22	62.8	75
6	Mahuda Washery	Industrial area	16.02.22	61.9	75
7	Sinidih Workshop (N38)	Industrial area	11.02.22	62.9	75
8	Sinidih Workshop	Industrial area	25.02.22	61.7	75
9	Patherdih (N39)	Industrial area	22.02.22	57.3	75
10	Patherdih	Industrial area	22.02.22	57.3	75
11	Koylanagar Hospital	Residential area	14.02.22	52.1	55
12	Koylanagar Hospital	Residential area	26.02.22	53.4	55

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

* Day Time: 6.00 AM to 10.00 PM,

Analysed By
JSA/SA/SSA

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

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

Dr. M. K. Singh