BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 976 OF 2024

In the matter of: -

Vijay Kumar Singh Urf Dablu Singh Bhiar Vihar Sabha

Applicant

Versus

State of Bihar Respondent(s)

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Filed by Adv. Srinivas Vishven (On behalf on Central Pollution Control Board)

Place: Delhi

Dated: 26.11.2024

INSPECTION REPORT OF THE JOINT COMMITTEE CONSTITUTED IN THE MATTER OF THE HON'BLE NGT OA NO. 976/2024/PB TITLED VIJAY KUMAR SINGH Vs STATE OF BIHAR & OTHERS.

Inspection site:

Industry premises of (1) M/s NTPC Ltd., Nabinagar Super Thermal Power Station (Old name M/s Nabinagar Super Thermal Power Project), Nabinagar, Aurangabad and (2) M/s Bhartiya Rail Bijlee Company Ltd. (BRBCL),

Nabinagar, Aurangabad.

Date of Inspection: 28.10.2024 & 29.10.2024.

Background:

The Hon'ble NGT, Eastern Zone Bench, Kolkata, took Suo Motu cognizance on the complaint of Sri Vijay Kumar Singh @ W Singh resident of Kshatriya Nagar, G.T. Road, Aurangabad, Bihar, Hon'ble MLA, Bihar Legislative Assembly dated 17th December 2023 and passed its order dated 03.10.2024, registered it as O.A. 976/2024/PB. The complaint is made w.r.t. air pollution caused due to usage of de-graded quality of Coal by M/s NTPC's Plants (i.e. NPGCL & BRBCL).

According to the letter petition of Sri Vijay Kumar Singh, M/s Nabinagar Power Generation Co Ltd (NPGCL) and M/s Bhartiya Rail Bijlee Co Ltd (BRBCL), both are subsidiary of M/s NTPC, and are using de-graded quality of Coal by mixing Waste Material, Black Filter dust and Dolo Char and causing pollution which further affecting the animals, agriculture and general public.

The matter was heard before Hon'ble NGT, Principal Bench on 3rd October 2024 and the Tribunal directed the following:

"...In our view, facts stated in Original Application required verification before taking any further action in the matter and therefore, we constitute a Joint Committee comprising Central Pollution Control Board (hereinafter referred to as 'CPCB'); Bihar State Pollution Control Board; (hereinafter referred to as 'BPCB') Integrated Regional Office Ministry of Environment Forest and Climate Change, Aurangabad; and District Magistrate, Aurangabad.

CPCB shall be the Nodal Authority for co-ordination and compliance."

The Tribunal directed that the committee shall collect relevant information after visiting the site, and submit a factual report and also verify as whether consent conditions and EC conditions have been complied with by the above proponents.

Formation of the Joint Committee:

In compliance with the Hon'ble NGT's directions, the Joint Committee was constituted based on nominations received from the respective Departments are as follows:

- The Bihar State Pollution Control Board nominated Sri Arun Kumar, the Board Analyst and Sri Manoranjan Kumar Singh, the Regional Officer, Gaya vide Letter No. 2394 dated- 18.10.2024 (Annexure- I).
- The Central Pollution Control Board, nominated Sri Sandeep Roy, Scientist- "D", Central Pollution Control Board, Eastern Regional Directorate, Kolkata. (Annexure- II).
- Regional Office, Ministry of Environment, Forest and Climate Change, Ranchi nominated Sri Sandeep Nandi, Scientist 'B' vide Letter No. – 7-248/ROR-2024/669 dated- 22.10.2024. (Annexure- III).
- The District Magistrate, Aurangabad nominated Sri Lalit Bhushan Ranjan, Additional District Magistrate, Aurangabad (Annexure- IV).

Meetings of the Committee Members:

The 1st meeting of the Committee was held on 23rd October 2024 (via VC Mode) to decide the methodology and date of the joint inspection. It was

- also opined by Committee members that intimation about the inspection/ site visit may be sent to Sri Vijay Kumar Singh, the Applicant. Accordingly, letter was sent to the applicant (via Email & WhatsApp Message).
- 2. In light of the above meeting of the members of the Joint Committee fixed the date of inspection on 28th & 29th October, 2024 and CPCB being nodal agency communicated to all concerned with a schedule of Pre-inspection meeting before proceeding for visit of site under reference at 01:00 PM on 28th October 2024. This was informed to Sri Vijay Kumar Singh Alias Dabloo Singh, Hon'ble Member of Bihar Bidhan Sabha, Kshatriya Nagar, G.T. Road, Nabinagar, Aurangabad, Bihar, the Applicant in this case, and requested to present during the Pre-inspection meeting on 28.10.2024. (CPCB letter dated: 24.10.2024 (Annexure-V).
- 3. As decided, Pre-Inspection meeting of the members of the Joint Committee was held on 28th October 2024 at the Office of the District Magistrate at 11:30 a.m., under the Chairmanship of the District Magistrate with Applicant's representative and Senior Officials of M/s NPGCL & M/s BRBCL. The meeting was attended by following (list enclosed as **Annexure: VI**).
 - Sri Shrikant Shastri, District Magistrate, Aurangabad
 - Sri Lalit Bhushan Ranjan, ADM, Aurangabad
 - Ms Ratna Priyadarshini, SDC, Aurangabad
 - Sri Arun Kumar, Board Analyst, BSPCB
 - Sri Manoranjan Kumar, R.O. Gaya, BSPCB
 - Sri Sandeep Nandi, Scientist B, MoEF & CC, Ranchi
 - Sri Sukhendu Biswas, Scientist B, CPCB, Kolkata
 - Sri Sandeep Roy, Scientist D, CPCB, Kolkata

Other Personnel

Dr Chandan Kumar, Representative of Applicant

- Sri C K Samanta, H.O.P., NPGCL- Nabinagar
- Sri B J C Sastry, C.E.O., BRBCL- Nabinagar
- Senior Officers of M/s NPGCL & M/s BRBCL
- 4. During the meeting, Dr. Chandan Kumar, Representative of Applicant was present. He was not aware of the issues, raised by the Hon'ble member of Vidhan Shabha. However, he raised following issues:
 - Overloading of Ash carrying Dumpers/ Trucks
 - Spillage of Wet ash during transportation
 - Spillage of Dry ash due to uncovered Dumpers/ Trucks
 - Fugitive emission from Ash dyke during high wind condition
 - Usage of De-graded coal for Power generation causing Air Pollution
- 5. After thorough deliberation during the meeting, the Joint Committee inspected the relevant areas of the plant where emissions were possible. The Joint Committee also verified compliance with the Consent to Operate (CTO) conditions for emissions and effluents under the relevant Acts. Additionally, the committee reviewed the conditions of the Environmental Clearance issued by the Ministry of Environment & Forest, Govt. of India for the establishment and expansion of production capacity.

Site Visit of M/s NTPC Ltd., Nabinagar Super Thermal Power Station (Old name M/s Nabinagar Super Thermal Power Project), Nabinagar, Aurangabad

- 1. M/s NTPC Ltd., Nabinagar Super Thermal Power Station (Old name M/s Nabinagar Super Thermal Power Project), Nabinagar, Aurangabad having power generation capacity of 1980 MW with 3 Supercritical units of 660 MW. The plant is situated in Aurangabad District of Bihar. The power generated from this plant is distributed to the State of Bihar (82.8%) and rest to UP, Gujarat, WB, Jharkhand, Orissa etc.
- 2. M/s NTPC-NSTPS is receiving coal in the range of 9.5 MMT/annum from various coal mines of Coal India Ltd (CIL) and NTPC Ltd. Major part of

coal is received from Central Coalfields Ltd, a subsidiary unit of CIL. The plant is also receiving coal from other subsidiaries of CIL like MCL, BCCL, NCL as well as mines of NTPC Ltd. The coal is supplied by CIL as per the Fuel Supply Agreement (FSA) between subsidiaries of Coal India Ltd (CIL) and NTPC Ltd.

- 3. The water for functioning of the plant is received from Sone River. The Plant has water agreement of 125 cusec. However, as per the available records, the plant is consuming 45 cusecs on annual average basis.
- 4. M/s NTPC-NSTPS station units started its commercial operation as follows:

• Unit#1: 06.09.2019

• Unit#2: 23.07.2021

• Unit#3: 01.06.2022

- 5. During the site visit, all the units were found operational.
- 6. Sri Bijendra Agrawal, DGM (EMG) and Sri Gopi, Sr Manager along with the other officers of the plant were present during the visit of the Joint Committee.
- 7. Environmental Clearance has been granted by the Ministry of Environment & Forest, Govt. of India vide its reference no. J-13012/127/2007-IA. II(T) dt. 17.12.2010 for the generation of 3 x 660 MW Super-Critical Technology Coal Based Thermal Power Plant at village- Majhiyan, in Nabinagar Taluk, in Aurangabad Distt. in Bihar. (Annexure- VII), which was subsequently revised on 20.03.2018 and 14.01.2020 with some Additional Conditions. The compliance report of Environmental Clearance is placed at Annexure- VIII.
- 8. The Bihar State Pollution Control Board has granted Consent to Establish (NOC) vide letter no.: PT (NOC)- 1008/09/4323 dated: 08.04.2011 (Annexure- IX); Emission Consent Order vide letter no.: 1839 dated: 15.06.2022 (Annexure- X) and Discharge Consent Order vide letter no.: 1840 dated: 15.06.2022 (Annexure- XI) to M/s NTPC Ltd., Nabinagar Super Thermal Power Station, Nabinagar, Aurangabad

for generation of 3×660 MW Super-critical Technology Coal Based Thermal Power Plant. Compliance Reports are being placed at **Annexure-XII**.

- 9. There are three Stack in M/s NTPC Ltd., Nabinagar Super Thermal Power Station and Electrostatic Precipitator (ESP) is installed as an Air Pollution Control Device (APCD) to control particulate matter emission. The porthole and platform have been provided with the stacks. The aforesaid APCD were found operational. The two Stacks were monitored by the team of Bihar State Pollution Control Board, Patna on 28.10.2024.
- 10. The unit has installed four Continuous Ambient Air Quality Monitoring Stations were located within the boundary of NTPC-NSTPP premises. At following locations:
 - 1. Toward village Shivanpur
 - 2. Near H-Block Office
 - 3. Near Admin Building
 - 4. Near Raw Water Pump House

Site visit of M/s Bhartiya Rail Bijlee Company Ltd. (BRBCL), Nabinagar, Aurangabad

- 1. M/s Bhartiya Rail Bijlee Company Ltd. (BRBCL), Nabinagar, Aurangabad is a subsidiary of NTPC Ltd. in JV with Indian Railways with equity participation of 74 % and 26 % respectively, having a capacity of 1000 MW with 4 units of 250 MW. The plant is situated in Aurangabad District, Bihar. The power from this plant is going to the Indian Railways (90%) and State of Bihar (10%).
- 2. The plant is receiving coal in the range of 5.0 MMT per annum from various coal mines of CIL other subsidiaries of CIL like NCL. The coal is supplied by CIL as per the Fuel Supply Agreement (FSA) between subsidiaries of Coal India Ltd (CIL) and BRBCL in line with other plants of NTPC.

- 3. The water for functioning of the plant is received from Sone River. The Plant has water agreement of 60 cusecs. However, as per the available records, the plant is consuming 25 cusecs on annual average basis.
- 4. BRBCL station units came into commercial operation as follows:

• Unit#1: 15.01.2017

• Unit#2: 10.09.2017

• Unit#3: 26.02.2019

• Unit#4: 01.12.2021

- 5. During the site visit three units (i.e. Unit # 2, 3, 4) were found operational. Unit# 1 was under shut down for overhauling work.
- 6. Mr. Mathew Eipe Kovoor, GM (O&M), Sri Vishal Dubey, AGM (O&M), Sri Pranesh Kumar DGM (Env.) along with the other officers of the plant were present during the visit of the Joint Committee.
- 7. Environmental Clearance has been granted by the Ministry of Environment & Forest; Govt. of India vide its reference no. J-13012/16/2003. IA. II(T) dtd. 03.08.2004 for the generation of 4 x 250 MW Coal Based Thermal Power Plant under Joint Venture with Indian Railways near village- Dhundwa, in Aurangabad District, Bihar (Annexure-XIII). The compliance report of Environmental Clearance is placed at Annexure-XIV.
- 8. The Bihar State Pollution Control Board has granted Consent to Establish (NOC) vide letter no.: T-2130, dated: 08.04.2004 (Annexure-XV); Emission Consent Order vide letter no.: 783, dated: 17.06.2021 (Annexure-XVI) and Discharge Consent Order vide letter no.: 7884, dated: 17.06.2021 (Annexure-XVII) to M/s Bhartiya Rail Bijlee Company Ltd. (BRBCL), Nabinagar, Aurangabad for the generation of 4 x 250 MW Super-critical Technology Coal Based Thermal Power Plant. Compliance Reports are being placed at Annexure-XVIII.
- 9. There are 04 MS Stack in M/s Bhartiya Rail Bijlee Company Ltd. (BRBCL), Nabinagar, Aurangabad through Electrostatic Precipitator

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(ESP) as an Air Pollution Control Device (APCD) to control particulate matter emission. The porthole and platform have been provided with the stacks. The aforesaid APCD were found operational. The two Stacks were monitored by the team of Bihar State Pollution Control Board, Patna on 29.10.2024.

- 10. The unit has installed four Continuous Ambient Air Quality Monitoring at different locations as mentioned below:
 - (1) Main Gate of Plant,
 - (2) Near Khadha Gate,
 - (3) Near Pirouta Gate,
 - (4) Near 'C' Type Quarter of Township.

Coal Management Policy of NTPC (NTPC- NSTPS and BRBCL)

- Coal subsidiary wise total number of rakes to be supplied to each Plant are planned by CC-FM in advance. Accordingly, Plants are advised to apply for the number of rakes required for the month. However, supply pattern depends on the factors i.e. Power demand, availability of Railway rakes and Coal production by concerned Mining agency in consideration of demand of coal in various Plants of M/s NTPC.
- Further the process of coal supply involves following steps:
 - a. The Mined Coal is transported from coal mine end (Pit head) to the railway siding by transporters engaged by Coal subsidiary.
 - b. The request for Railway rake is placed by Coal subsidiary to Indian Railways.
 - c. Accordingly, Indian Railway provides the rake placement as per availability and provides a time period of 3-5hr (at different sidings) for loading of rake else demurrage charge is applicable.
 - d. These rakes are placed for multiple consumers one after the other or on parallel lines at same siding. The sequence of Coal loading for specific plant is not provided in advance as it depends on the availability and type of Rakes.

Coal quality check procedure:

- Coal sample is collected *from rake* by a third party appointed jointly by Coal subsidiary and NTPC.
- After that rake start from the siding under the instruction and control of Indian Railways and movement, route, time etc. is planned by railways only. This rake until reaches to destination station/ Plant remains under control of Railways.
- ➤ After reaching the destination the coal rake is handed over to the consumer (NSTPS & BRBCL) and given 2.5hr (BOBR)/ 7hr (BOXN) for unloading the rake. The rake turns out time/ cycle time is monitored on real time basis by Indian Railway as per their SoP and different level to reduce the cycle time.
- ➤ Indian Railway rake is taken to the Plant end wagon tippler and track hopper for direct unloading the entire coal and conveying to the unit bunker/ stock yard by belt conveyor.
- ➤ This sample collected by Third party is prepared with crushing coning/ quartering process in 4 parts. One sample is tested by the Third party itself. One sample is submitted to coal subsidiary and consumer each for testing at their end. Other part of sample is kept with third party for reference in case there is disagreement on test results (submitted by third party) between subsidiary and consumer.
- ➤ Third party tests the sample and submit the report to supplier and consumer both. Supplier and consumer depending upon the result of their own sample report, agree or disagree on this result submitted by third party. Reference sample is tested by a separate party.
- > Sometimes sample is not collected due to non-enabling conditions at siding. In this situation, average of previously supplied coal rake sample results is considered as result of un-sampled coal rake.
- ➤ Coal sample is also collected from wagons at unloading end and tested. As per the results available, average difference is of the order of approx. 0-600 kCal. The principal reason for such difference may be sampling

- error and un-homogenised sample of bulk quantity of the coal received.
- Coal test/ analysis results for both the Plants are enclosed as Annexure- XIX

Stack Sampling and Monitoring Results:

During visit, the Stack monitoring work was carried out for randomly selected Stacks. The analysis report is following:

Plant	Location	PM (mg/Nm ³)
	Stack of	43.87
M/s NPGCL	Unit-2	
m, s m dez	Stack of	39.53
	Unit-3	
	Stack of	17.3
M/s BRBCL	Unit-3	
M/S BRBCE	Stack of	29.72
	Unit-4	
Standard Limit	1	30

^{**}The value of SOx was analysed as 528 & 498 for Unit 3 & 4 respectively (M/s NPGCL) and 606 & 638 for Unit 3 & 4 respectively (M/s BRBCL). FGD installation for all units is in process.

The observations of the Joint Committee at NTPC- NSTPS are as follows:-

- 1. The Joint Committee visited Ash Dyke, Coal Handling Plant, Circulation Area/ Transportation Pathway of Ash Dyke and other areas of M/s NTPC- NSTPS.
- 2. All the units were found operational during visit.

- The annual coal consumption of the unit is around 9.5 Million MT/Annum, which is procured from CCL and other mines through Railway Rakes.
- 4. The coal procurement is under the centralized 'Central Procurement Team' at corporate level. The ash content is between 35% and 40% and its Gross calorific value (GCV) is between 3700 and 4000. Third Party Agency takes samples at the loading point and unloading point and generates report for given parameters. In the event of variation in the parameter (>10%), it is duly informed to both the parties for further process.
- 5. The plant is designed for the coal of 35% to 40% ash contents.
- 6. The plant has constructed RCC approach road up to Ash Dyke. However, the unit has not constructed roads from the approach road to the Ash Dyke Bund. The unpaved road can result into the resuspension of fly ash during the movement of vehicles and can cause problem to the nearby resident (at about 200 meters).
- 7. Facility of Recirculating the water of Ash Dyke to the plant for slurry making is available.
- 8. The unit has installed three Wagon Tippler for downloading the coal from the wagons. The wagon tippler has water sprinkling system at two levels. One overhead pre sprinkling system is installed just before tippler. Another overhead water sprinkling system is over the coal falling platform.
- 9. The water sprayer over the wagon tippler was not functioning. It may result the fugitive emission. However, the unit have a movable Cannon Fogging Machine to combat such situation.
- 10. Boulder heaps were observed in the vicinity of coal handling plant. It was informed that the rejects coming along the coal is segregated during the tripling of wagons.
- 11. The unit has installed Sewage Treatment Plant (STP) having a capacity of 1.7 MLD.

- 12. The installation of Flue Gas Desulphurization units was under construction.
- 13. The Unit is disposing bottom ash for filing of road being constructed by NHAI.
- 14. They have constructed Ground Water Recharging Pit.
- 15. The Unit is maintaining Zero Liquid Discharge (ZLD).
- 16. The Unit has installed 04 Continuous Ambient Air Quality Monitoring Station at different locations inside the premises.
- 17. The unit has installed *Continuous Emission Monitoring System* at all the Stacks having sensor for PM, SO2 NOX and also installed *Continuous Effluent Monitoring System* at Effluent Treatment Plant (ETP) having sensor for BOD, COD & TSS.

The observations of the Joint Committee at BRBCL are as follows: -

- 1. The Committee members visited Ash Dyke, Coal Handling Plant, Circulation Area/ Transportation Pathway of Ash Dyke and other areas of M/s BRBCL.
- 2. The unit 2, 3, 4 were found operational during visit however, Unit 1 was found under shut down for maintenance purpose.
- The annual coal consumption of the unit is around 5.0 Million MT/Annum, which is procured from CCL and other mines through Railway Rakes.
- 4. The coal procurement is under the centralized 'Central Procurement Team' at corporate level. The ash content is between 40% and 47% & its Gross calorific value (GCV) is between 2900 and 3800. Third Party Agency taking samples at the loading point and unloading point and generates report for given parameters. In the event of variation in the parameter (>10%), it is duly informed to both the parties for further process.
- 5. The plant is design for the coal of 40% to 47% ash contents.

- 6. The plant has RCC approach road up to Ash Dyke. They have constructed paved approach road and road over the Ash Dyke bund made up of bricks all around the dyke. As per the authority of the unit that they have placed the work order for construction of RCC road from the main road to the ash dyke. The work is about to start.
- 7. The unit is not having RCC roads from the main road to the Ash Dyke.

 The unpaved road results into the re-suspension of fly ash during the movement of vehicles and may cause some problem to general public.
- 8. Facility of recirculating the water of Ash Dyke to the plant for slurry making is available which again goes to Ash Dyke.
- 9. The unit has installed 2 nos. Wagon Tippler for downloading the coal from the wagons. The wagon tippler has water sprinkling system at two levels. One overhead pre sprinkling system is installed just before tippler. Another overhead water sprinkling system is over the coal falling platform. The water sprayer over the wagon tippler was not functioning. It may result the fugitive emission. However, the unit have a movable Cannon Fogging Machine to combat such situation.
- 10. Boulder heaps were observed in the vicinity of coal handling plant. It was informed that the rejects coming along the coal is segregated during the tripling of wagons.
- 11. The unit has installed Sewage Treatment Plant (STP) having a capacity of 1.2 MLD.
- 12. The installation of Flue Gas Desulphurization units was under construction.
- 13. They are disposing bottom ash for filling of road being constructed by NHAI.
- 14. The Unit is maintaining Zero Liquid Discharge (ZLD).
- 15. They have installed 04 Continuous Ambient Air Quality Monitoring Station (CAAQMS) at different locations inside the premises at (1) Main Gate of Plant, (2) Near Khadha Gate, (3) Near Pirouta Gate, (4) Near 'C' Type Quarter of Township.

16. The unit has installed *Continuous Emission Monitoring System* at all the Stacks having sensor for PM, SO2 NOX and also installed *Continuous Effluent Monitoring System* at Effluent Treatment Plant (ETP) having sensor for BOD, COD & TSS.

Recommendations of the Joint Committee for NTPC-NSTPS, Nabinagar, Aurangabad

- 1. Wheel washing system may be installed at the out gate of the Ash Dyke.
- 2. The connecting road between Highway and Ash dyke should be made up of RCC.
- 3. Vehicle transporting Fly Ash may be covered form all sided so that fly ash cannot spillover to the environment.
- 4. Overload may be stopped.
- 5. Mechanical vacuum cleaning system may be in place to clean all RCC roads on regular basis and collected ash may be disposed properly.
- 6. Ensure 100% ash utilization within by next year as per the Environmental Clearance conditions.
- 7. The unit may ensure Zero Liquid Discharge, no discharge from the Ash Dyke and ensure installation of Oil & Grease section to the ETP as per the requirement.
- 8. The unit may ensure maintenance of the water spraying system at Wagon Tippler section and stop unloading till the system put in operation.
- 9. Unit may comply Specific Condition No. 3, 4, 15, 16, 17, 18, 19 of the Environmental Clearance within one year.
- 10. Unit may submit Specific Water Consumption, and Water Balance Report on yearly basis.
- 11. Unit may ensure water spraying on all the dusty roads within and outside the premises caused by transportation of fly ash.

- 12. Unit may ensure tree plantation in all vacant land within its premises and other probable places as per the regulations.
- 13. Unit ensure the implementations of the Solid Waste Management Rules, 2016, the Construction and Demolition Waste Management Rules, 2016, the Plastic Waste Management Rules, 2016, the E-Waste Management Rules, 2022, the Hazardous and Other Waste (Management, Handling and Trans-boundary Movement) Rules, 2016 and other waste management rules.
- 14. *System* at Effluent Treatment Plant (ETP) having sensor for pH, BOD, COD & TSS.

Recommendations of the Joint Committee for BRBCL, Nabinagar, Aurangabad

- 1. Wheel washing system may be installed at the out gate of the Ash Dyke.
- 2. The connecting road between Highway and Ash dyke should be made up of RCC.
- 3. Vehicle transporting Fly Ash may be covered form all sided so that fly ash cannot spillover to the environment.
- 4. Overload may be stopped.
- 5. Mechanical vacuum cleaning system may be in place to clean all RCC roads on regular basis and collected ash may be disposed properly.
- 6. Ensure 100% ash utilization within a year as per the Environmental Clearance conditions.
- 7. The unit may ensure Zero Liquid Discharge, no discharge from the Ash Dyke and ensure installation of Oil & Grease section to the ETP, as per requirement.
- 8. The unit may ensure maintenance of the water spraying system at Wagon Tippler section and stop unloading till the system put in operation.

- 9. Unit may comply Terms and Conditions No. X, XI, XIV, XVI, XVIII, XIX and XXI of the Environmental Clearance within one year.
- Unit may submit Specific Water Consumption, and Water Balance Report on yearly basis.
- 11. Unit may ensure water spraying on all the dusty roads within and outside the premises caused by transportation of fly ash.
- 12. Unit may ensure tree plantation in all vacant land within its premises and other probable places as per the regulations.
- 13. Unit ensure the implementations of the Solid Waste Management Rules, 2016, the Construction and Demolition Waste Management Rules, 2016, the Plastic Waste Management Rules, 2016, the E-Waste Management Rules, 2022, the Hazardous and Other Waste (Management, Handling and Trans-boundary Movement) Rules, 2016 and other waste management rules.

(Sandeep Nandi)

Scientist B,

MoEF & CC, Ranchi

(Arun Kumar)

Board Analyst,

BSPCB, Patna

(Lalit Bhushan Ranjan),

Addl Dist. Magistrate,

Aurangabad, Bihar

(Manoranjan Kumar Singh)

Regional Officer,

BSPCB, Gaya

(Sandeep Roy)

Scientist D,

CPCB, Kolkata

ई-मेल

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पत्रांकः P/Legal01- 168/2024

पटना दिनांकः

प्रेषक.

नीरज नारायण, नावले सदस्य-सचिव।

सेवा में.

- सदस्य-सचिव. केन्द्रीय प्रदूषण नियंत्रण बोर्ड, दिल्ली। ई–मेल-ъ₃cb.cpcb@nic.in
- जिलाधिकारी, औरंगाबाद। ई-मेल- dm-aurangabad,bih@nic.in
- वन उप महानिदेशक. पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय। समेकित क्षेत्रीय कार्यालय, बंग्लो नं0- 02. श्यामली कॉलोनी, रांची- 834002 (झारखण्ड) ई-मेल- ro.ranchi-mef@gov.in

Most urgent Hon'ble NGT matter

विषयः माननीय राष्ट्रीय हरित अधिकरण, प्रधान बेंच, दिल्ली में दायर O.A. No.- 976/2024, Vijay Kumar Singh V/S State of Bihar के मामले में दिनांक 03.10.2024 को पारित आदेश के अनुपालन के संबंध में।

प्रसंगः औरंगाबाद जिले के नवीनगर में NTPC के दो धर्मल पावर प्लांट अर्थात NPGC एवं BRBCL के संचालन से हो रहे वायु प्रदूषण का मामला।

महाशय.

उपर्युक्त प्रसंगाधीन विषय के संबंध में सूचित करना है कि माननीय राष्ट्रीय हरित अधिकरण, प्रधान बेच, दिल्ली के द्वारा श्री विजय कुमार सिंह, सदस्य विधान सभा से प्राप्त पत्र याचिका को मूल आवेदन के रूप में पंजीकृत किया गया है। विषयांकित मामला औरंगाबाद जिले के नवीनगर में NTPC के दो धर्मल पावर प्लांट अर्थात NPGC एवं BRBCL के संचालन से हो रहे वायु प्रदूषण के कारण स्थानीय लोगों के स्वास्थ्य पर प्रतिकूल प्रभाव पड़ने का मामला है।

माननीय राष्ट्रीय हरित अधिकरण ने दिनांक 03.10.2024 को मामले की सुनवाई के दौरान विषयांकित मामले की तथ्यात्मक जांच करने हेतु निम्न सदस्यों की संयुक्त समिति गठित किया है (आदेश एवं पत्र याचिका की प्रति संलग्न):--

- केन्द्रीय प्रदूषण नियंत्रण बोर्ड
- बिहार राज्य प्रदूषण नियंत्रण पर्षद्
- सामेकित क्षेत्रीय कार्यालय, पर्यावरण, वन एवं जलवायु परिवर्तन विभाग
- जिलाधिकारी, औरंगाबाद

माननीय अधिकरण ने CPCB को मामले में समन्वय और अनुपालन हेतु नोडल प्राधिकरण बनाया है।

उक्त समिति को निर्देश दिया गया है कि स्थल का दौरा करने के एक महीना के भीतर तथ्यात्मक जांच रिपोर्ट प्रस्तुत करेगी जिसमें उल्लेखित हो कि प्रस्तावकों के द्वारा सहमित शर्तों और पर्यावरणीय रवीकृति (EC) शर्तों का अनुपालन किया गया है या नहीं?

उक्त संदर्भ में सूचित किया जाता है कि पर्षद् के श्री अरूण कुमार, पर्षद् विश्लेषक (मोबाईल नंo.— 9771023486 एवं E-mail- bspcb.arun@gmail.com) एवं श्री मनोरंजन कुमार सिंह, क्षेत्रीय पदाधिकारी, गया प्रक्षेत्र (मोबाईल नंo.— 8789336767) को गठित समिति में पर्षद् का प्रतिनिधित्व करने के लिए संयुक्त रूप से नामित किया जा सकता है।

माननीय अधिकरण के द्वारा प्रासंगिक मामले की सुनवाई हेतु दिनांक— 04.11.2024 को सूचीबद्ध किया गया है।

कृपया इसे सर्वोच्च प्राथमिकता देंगे।

अनुलग्नकः यथो०।

विश्वासभाजन ह0 / – (नीरज नारायण) सदस्य–सचिव।

ज्ञापांकः 2394

पटना, दिनांकः 18·10·24

प्रतिलिपिः श्री अरूण कुमार, पर्षद् विश्लेषक, मुख्यालय पटना/ श्री मनोरंजन कुमार सिंह, क्षेत्रीय पदाधिकारी, गया प्रक्षेत्र को आदेश एवं पत्र याचिका की प्रति संलग्न करते हुए निर्देश दिया जाता है कि विषयांकित मामलों के संदर्भ में संबंधित से समन्वय स्थापित कर अग्रतर कार्रवाई सुनिश्चित करना चाहेंगे।

अनुलग्नकः यथो०।

(नीरज नारायण) सदस्य-सचिव।

(3)

Item No.01

Court No. 2

BEFORE THE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH, NEW DELHI

Original Application No.976/2024

Vijay Kumar Singh

...Applicant

Versus

State of Bihar

...Respondent

Date of hearing: 03.10.2024

CORAM:

HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER

HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER

Applicant(s):

None

ORDER

- On a letter petition dated 17.12.2023 sent by Vijay Kumar Singh @ W Singh resident of Kshatriya Nagar, G.T. Road, Aurangabad, State of Bihar, this Original Application has been registered under Sections 14 and 15 of National Green Tribunal Act, 2010 (hereinafter referred to as NGT Act, 2010) exercising suo-moto jurisdiction in view of law laid down by Supreme Court in Municipal Corporation of Greater Mumbai Versus Ankita Sinha and Others, (2022) 13 SCC 401.
- Complainant has said that there are two Thermal Power Plants of National Thermal Power Corporation namely BRBCL and NPGC functioning at Nabinagar, District Aurangabad, wherein fuel used for

(2)

generation of electricity comprised a waste material, black filter dust and rejected coal which is causing air pollution effecting local people and creating health hazards.

- 3. In our view, facts stated in Original Application required verification before taking any further action in the matter and therefore, we constitute a Joint Committee comprising Central Pollution Control Board (hereinafter referred to as 'CPCB'); Bihar State Pollution Control Board; (hereinafter referred to as 'BPCB') Integrated Regional Office Ministry of Environment Forest and Climate Change, Aurangabad; and District Magistrate, Aurangabad.
- CPCB shall be the Nodal Authority for co-ordination and compliance.
- 5. Said Committee shall collect relevant information after visiting the site, and submit a factual report within one month. Committee shall also verify as to whether consent conditions and EC conditions have been complied with by the above proponents.
- List for further consideration on 04.11.2024.

Sudhir Agarwal, JM

Dr. Afroz Ahmad, EM

October 03, 2024 Original Application No.976/2024 M

्य कु. सिंह उर्फ डब्लू सिंह

े सदस्य बिहार विधान सभा (221, नवीनगर, औरंगाबाद)



क्षत्रिय नगर, जी. टी. रोड, औरंगाबाद - 824101 मो.: 9431225900, 9934979836

4 pla 840 /023

दिनांक 1 > 112/023

2706/21/2023

Swee greatly

सेवा में 23//

अध्यक्त.

Subject to pop

राष्ट्रीय हरित नियंत्रण (एन०जी०टी०), इंडिया गेट, नई दिल्ली।

विषयः- औरंगाबाद जिलान्तर्गत गवीनगर स्थित एन०टी०पी०सी० में घटिया कोयला के उपयोग से उत्पन्न प्रदूषण के संबंध में।

महोदथ,

राज्य के औरंगाबाद जिलान्तर्गत नवीनगर में एन०टी०पी०सी० के वो पावर प्लांट बी०आर०बी०सी०एन० और एन०पी०जी०सी० कार्यरत है। इन परियोजनाओं में उर्जा उत्पादन के लिए कोल इंडिया लिमिटेड के विभिन्न शाखाओं से कोयले की आपूर्ति बड़े पैमाने पर रैक के माध्यम से किया जाता है। ऐसी सूचना मिली है कि कोयले की आपूर्ति करने वाली एजेन्सी और उपरोक्त कम्पनियों के कुछ पदाधिकारियों की मिलीभगत से 50 प्रतिशत उन्जत कोयले को बेचकर उसके बदले में वेस्ट मैटेरियल, ब्लैक फिल्टर इस्ट, होल चार्ज तथा रिजेक्शन कोयला मिलाकर कम्पनी को आपूर्ति की जा रही है। इस कोयले के प्रयोग से प्रदूषण का स्तर काफी बढ़ गया है, जिससे क्षेत्र की जनता गंभीर बीमारियों का शिकार हो रही है तथा जानवरों और फसलों पर भी इसका प्रतिकृत प्रभाव पड़ रहा है। घटिया कोयले के प्रयोग से न केवल प्रदूषण बढ़ रहा है, बरन् सरकारी राजस्व की भी क्षति हो रही है।

अतः अनुरोध है कि उपरोक्त तथ्यों की उच्च स्तरीय जांच कराते हुए घटिया कोयले के प्रयोग से उत्पन्न प्रदूषण को नियंत्रित करने की कार्रवाई करने के साथ ही दोषियों पर भी कार्रवाई की जाय। जनहित में इसे अतिआवश्यक समझा जाय।

366/HEP. R2/12/23 विजय कुमार सिंह उर्फ हब्लू सिंह) संविवश्य

केन्द्रीय 9रूजण नियंत्रण बोर्ड







(पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार)

Ministry of Environment, Forest & Climate Change, Govt. of India)

क्षेत्रीयनिदेशालय, कोलकाता Regional Directorate, Kolkata



दिनांक: 20.10.2024

MOST URGENT/NGT MATTER

सेवा में

 डिप्री डायरेक्टर जनरल ऑफ़ फॉरेस्टस (सी). इंटीग्रेटेड रीजनल ऑफिस-पर्यावरण, वन और जलवाय परिवर्तन मंत्रालय 2nd फ्लोर, हेडकार्टर- झारखण्ड स्टेट हाउसिंग बोर्ड, रांची .834002

Email- ro.ranchi-mef@gov.in

2. सदस्य सचिव

बिहार राज्य प्रदूषण नियंत्रण बोर्ड, बेल्ट्रॉन भवन , शास्त्री नगर , जवाहर लाल नेहरू मार्ग, पटना (बिहार), 800023

E-mail: msbspcb-bih@gov.in or bspcb@vahoo.com

 जिला मजिस्टेट / जिला कलेक्टर जिला कलक्टेंट बिल्डिंग ,औरंगाबाद (बिहार)-824010 Email-dm-aurangabad.bih@nic.in

विषय: OA संख्या 976/2024/PB (विजय कुमार सिंह बनाम बिहार राज्य व अन्य) मामले में नामांकन पत्र।

महोदय.

OA संख्या 976/2024 (विजय कुमार सिंह बनाम बिहार राज्य व अन्य) के मामले में माननीय एनजीटी के दिनांक 03.10,2024 के आदेश का संदर्भ है जिसमें निम्नलिखित निर्देशित किया गया है:

- **3. In our view, facts stated in Original Application required verification before taking any further action in the matter and therefore, we constitute a Joint Committee comprising Central Pollution Control Board; Bihar State Pollution Control Board; Integrated Regional Office Ministry of Environment Forest and Climate Change, Aurangabad; and District Magistrate, Aurangabad"
- "4 .CPCB shall be the nodal agency for coordination and compliance."
- "5. Said Committee shall verify as to whether consent conditions and EC conditions have been complied with by the above proponents."

इस संबंध में श्री Sandeep Roy, Scientist D (मोबाइल नंबर 9903816939 & Email-sandeeproy.cpcb@nic.in & rdkolkata.cpcb@gov.in) को निरीक्षण करने के लिए इस समिति में केंद्रीय प्रदूषण नियंत्रण बोर्ड का प्रतिनिधित्व करने के लिए सक्षम प्राधिकारी द्वारा नामित किया गया है।

साइट विजिट और इस विषय से संबंधित अन्य मामलों के संबंध में सभी संवाद श्री Sandeep Roy, Scientist D को इस कार्यालय को एक प्रति के साथ भेजा जा सकता है।

उपरोक्त को ध्यान में रखते हुए आपसे अनुरोध है कि कृपया समिति का पक्ष रखने के लिए अपने कार्यालय से एक अधिकारी को नामित करें ताकि सुनवाई की अगली तारीख यानी 04.11.2024 से पहले साइड विजिट कर रिपोर्ट माननीय एनजीटी के समक्ष प्रस्तुत किया जा सके। माननीय एनजीटी आदेश दिनांक 03.10.2024 की प्रति आपके त्वरित संदर्भ के लिए संलग्न है।

प्रारंभिक वर्चा के उद्देश्य से एक वीसी बैठक (लिंक https://meet.google.com/wap-gtah-zgy) 23/10/2024 @ 1500 hrs को निर्धारित

संलग्नक:उपरोक्तानुसार

भवदीय

(मृ. कां. बिस्वास) क्षेत्रीय निदेशक

मुख्यासय/Head Office: परिवेश भवन/Parivesh Bhawan, पूर्वी अर्जुन नगर/East Arjun Nagar दिल्ली/Delhi-110 032 3₹WITI/Tel: 011-43102030, 22305792 वेबसाइट/Website: www.cpcb.nic.in

क्षेत्रीय निदेशालय/Regional Directorate: 502, साउपएंड कॉनव्सेव/502, Southend Conclave 1582,राजडांगा मेन रोड/1582, Rajdanga MainRoadकोलकाता/Kolkata- 700107 37HM/Tel: 033-2441 4677 ई-मेल/e-mail: rdkolkata.cpcb@gov.in

जानकारी के लिए प्रति:

- डीएच- आईपीसी-॥, सीपीसीबी दिल्ली
 डीएच-लॉ, सीपीसीबी दिल्ली

- एमएस के लिए पीएस
 श्री संदीप रॉय, एससी डी, आरडी कोलकाता

मृ. कां. ब्रिस्ट्या (मृ. कां. बिस्वास) क्षेत्रीय निदेशक

Annexure III

======== Forwarded Message =========

From: ro.ranchi-mef@gov.in

Fwd: Nomination from Regional Office Ranchi, Ministry of Environment Forest and Climate Change...

To: sandeeproy.cpcb@nic.in,rdkolkata.cpcb@gov.in Cc: msbspcb_bih@gov.in,dm-aurangabad.bih@nic.in

Date: Tue, 22 Oct 2024 13:43:16 +0530

Subject: Nomination from Regional Office Ranchi, Ministry of

Environment Forest and Climate Change in OA No. 976/2024 (Vijay

Kumar Singh Vs. State of Bihar) - reg

======== Forwarded Message ==========

महोदय,

This is to inform you that Hon'ble NGT Principal Bench, New Delhi, vide order dated 03.10.2024 in OA No. 976/2024 (Vijay Kumar Singh Vs. State of Bihar) has constituted a Joint committee comprising of the ""... Central Pollution Control Board, Bihar State Pollution Control Board; Integrated Regional Office Ministry of Environment Forest and Climate Change, Aurangabad; and District Magistrate, Aurangabad".

Accordingly, this is to inform that Shri Sandeep Nandi, Scientist 'B' (Mobile No.90904 65288, email id: ro.ranchi-mef@gov.in) has been nominated from Regional Office Ranchi of the MoEF&CC as a member of the above Joint committee constituted by Hon'ble NGT. This is for your information and necessary action, please

With regards,

Regional Office (MoEFCC) - Ranchi / क्षेत्रीय कार्यालय - राँची Ministry of Environment & Forest Climate Change / पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय

2nd Floor, Headquarter-Jharkhand State Housing Board, Harmu Chowk, Ranchi, Jharkhand - 834002 द्वितीय तल, झारखण्ड राज्य आवास बोर्ड मुख्यालय, हरम् चौक, राँची, झारखण्ड – 834002

Tel.: 0651-2410002/2410007

कार्यालय जिला पदाधिकारी एवं समाहर्त्ता, औरंगाबाद

(जिला सामान्य शाखा)

पत्रांक-2269 /सा0,

प्रेषक.

जिला पदाधिकारी औरंगाबाद

सेवा में.

मुख्य कार्यकारी पदाधिकारी, भारतीय रेल बिजली कंपनी लिमिटेड (BRBCL), नबीनगर, औरंगाबाद। मुख्य कार्यकारी पदाधिकारी, नबीनगर पावर जेनरेशन कंपनी प्राइवेट लिमिटेड (NPGC), नबीनगर, औरंगाबाद

औरंगाबाद, दिनांक-24 16:24

विषय:— माननीय NGT, नई दिल्ली में दायर O.A NO -976/2024 विजय कुमार सिंह बनाम बिहार राज्य के मामले में दिनांक-03.10.2024 को पारित आदेश के अनुपालन हेतु बैठक में भाग लेने के संबंध में।

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के संबंध में कहना है कि माननीय NGT, नई दिल्ली में दायर O.A NO-976/2024 विजय कुमार सिंह बनाम बिहार राज्य के मामले में दिनांक-03.10.2024 को पारित आदेश के अनुपालन हेतु औरंगाबाद जिला के नबीनगर में NTPC के दो थर्मल पावर प्लांट अर्थात N.P.G.C एवं B.R.B.C.L. के संचालन से हो रहे वायु प्रदूषण से संबंधित मामले की जॉच हेतु 4 सदस्यीय संयुक्त समिति का गठन किया गया है। दिनांक-28.10. 2024 को संयुक्त समिति के सभी सदस्य जिला औरंगाबाद में आ रहे हैं। सदस्यों द्वारा स्थलीय जॉच करने से पूर्व निरीक्षण से संबंधित बैठक दिनांक-28.10.2024 को दोपहर 1:00 बजे जिला अतिथि गृह, औरंगाबाद में निर्धारित किया गया है।

अतः उक्त बैठक में दिनांक—28.10.2024 को दोपहर 1:00 बजे जिला अतिथि गृह, औरंगाबाद में भाग लेना सुनिश्चित करेगें। अनुलग्नक:—यथोक्त।

विश्वासभाजन,

जिला पदाधिकारी, औरंगाबाद

Annexure V



केन्द्रीय प्रदूष्ट जिल्ला बोर्ड CENTRAL POLLUTION CONTROL BOARD

प्रमाणक, संर पर्व कारान्य परिकास सकता, बनार साहान्य (Ministry alternational Ference County Charge, seed of holes) क्षेत्रीय निरोधालयः, कोलकाता

क्षेत्रीय निदेशालय, कोतकाता Regional Directorate, Kolkata



दिनांक:24.10.2024

सेवा में , श्री विजय कुमार सिंह उर्फ डबलू सिंह माननीय सदस्य बिहार विधान सभा क्षत्रिय नगर, जी.टी. सड़क नबीनगर, बिहार ईमेल: vijaydablu2012@gmail.com विषय: OA No 976/2024/08 किय

विषय: OA No.976/2024/PB (विजय कुमार सिंह बनाम बिहार राज्य) के मामले में गठित संयुक्त समिति के द्वारा स्थल निरीक्षण करने के सम्बन्ध में ।

महोदय,

यह ओए नंबर 976/2024/पीबी (विजय कुमार सिंह बनाम बिहार राज्य) के मामले में माननीय एनजीटी के दिनांक 03 10.2024 के आदेश का संदर्भ है, जिसमें माननीय एनजीटी द्वारा एक संयुक्त समिति का गठन किया गया था। जिसमें केंद्रीय प्रदूषण नियंत्रण बोर्ड, बिहार राज्य प्रदूषण नियंत्रण बोर्ड, एकीकृत क्षेत्रीय कार्यालय, पर्यावरण वन्य जीव एवं जलवायु परिवर्तन मंत्रालय , औरंगाबाद और जिला मंजिस्ट्रेट औरंगाबाद। माननीय एनजीटी के आदेश के अनुसार केंद्रीय प्रदूषण नियंत्रण बोर्ड नोडल एजेंसी है; और आगे इसमें निर्देशित किया गया है कि

*__Said Committee shall collect relevant information after visiting the site, and submit a factual report within one month. Committee shall also verify as to whether consent conditions and EC conditions have been complied with by the above proponents."

तदनुसार, संयुक्त समिति का साइट दौरा 28-29 अक्टूबर 2024 के दौरान किया जाना निर्धारित है। साइट विजिट के तिए आगे बढ़ने से पहले 28 अक्टूबर को दोपहर 01:00 बजे सर्किट हाउस औरंगाबाद, बिहार में एक पूर्व-निरीक्षण बैठक भी निर्धारित किया गया है।

उपरोक्तानुसार , आप से यह अनुरोध है की आप स्वयं व्यक्तिगत रूप से या अधिकृत प्रतिनिधि के माध्यम से समिति के सदस्य को मामले के बारे में विस्तृत रूप से जानकारी देने के लिए उक्त बैठक में सम्मितित हो सकते हैं।

भवदीय

मृ. कां. क्रिश्चीय (मृनात कांति विस्वास)

क्षेत्रीय निदेशक

सूचनार्थ:

- जिला मजिस्ट्रेट का कार्यालय, औरंगाबाद, विहार dm-aurangabad.bih@nic.in
- श्री संदीप नंदी, वैज्ञानिक 'ख', पर्यावरण वन्य जीव एवं जलवायु परिवर्तन मंत्रालय रांची: ro.ranchi-met@gov.in
- 3. श्री अरुण कुमार , बोर्ड एनालिस्ट , बिहार राज्य प्रदूषण निपंत्रण बोर्ड पटना ;bspcb.arun@gmail.com
- श्री. संदीप रॉप , वैज्ञानिक 'घ' , केंद्रीय प्रदूषण नियंत्रण बोर्ड , क्षेत्रीय निदेशालय कोलकाता 700107; sandeeproy.cpcb@nic.in

बैठक हेतु सर्किट हाउस में आवश्यक व्यवस्था के संबंध में

पूर्व-निरीक्षण बैठक एवं निर्धारित कार्यक्रम के अनुसार क्षेत्र भ्रमण में भाग लेने के अनुरोध के साथ

म् ना विश्वास

(मृनात कांति विस्वास)

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9 तीय विदेशालयास egional Directorale Soz. माउन्स्त व्यवस्थातास्य Southend Constitue 1582, तारदावा मेर्न तीत 1582, माउन्सापुत Main Road बोट्नार्ग्यास्य स्थाप स्थाप स्थाप हुम्मापुरस्य 332-2441 1877 हु तीकार स्थाप स्थापना स्थापना स्थापना हुम्मा



केन्द्रीय प्रदूष अभिज्ञण बोर्ड CENTRAL POLLUTI MONTROL BOARD

gaders, as an arrest offsets were, who make stary of Engineers, Force & Comp. Overp., Geo. of mice.

क्षेत्रीय निर्देशालय, कोलकाता Regional Directorate, Kolkata



Date: 24.10.2024

To Shri. Vijay Kumar Singh Alias Dabloo Singh Hon'ble Member of Bihar Bidhan Sabha Kshatriya Nagar, G.T. Road Nabinagar, Bihar Email: vijaydablu2012@gmail.com

Sub: Site Visit of the Joint Committee constituted in the matter of OA No.976/2024/PB (Vijay Kumar Singh Vs. State of Bihar)

Sir.

This has reference to the Hon'ble NGT order dated 03.10.2024 in the matter of OA No. 976/2024/PB (Vijay Kumar Singh Vs. State of Bihar) wherein a joint committee was constituted by Hon'ble NGT comprising of Central Pollution Control Board, Bihar State Pollution Control Board, Integrated Regional Office MoEF&CC, Aurangabad and DM Aurangabad. CPCB is the nodal agency as per Hon'ble NGT order. It was further directed that

"... Said Committee shall collect relevant information after visiting the site, and submit a factual report within one month. Committee shall also verify as to whether consent conditions and EC conditions have been complied with by the above proponents."

Accordingly, site visit of the Joint Committee is scheduled to be carried out during 28th -29th October 2024. Before proceeding for site visit a Pre-Inspection meeting is also scheduled at 01:00 PM on 28th October at Circuit House Aurangabad, Bihar.

In view of above, your goodself may attend the said meeting in person or through authorized representative to brief the committee member about the matter in detail.

Yours faithfully,

(M. K.Biswas) Regional Director

Copy to:

1. Office of district Magistrate, Aurangabad, Bihar, dmaurangabad, bih@nic.in-

- Shri Sandeep Nandi, Scientist B, MoEF &CC Ranchi; ro.ranchi-mcf@gov.in
- Shri Arun Kumur, Bourd Analyst, BSPCB Patna; bspcb.arun@gmail.com
- Shri, Sandeep Roy, Scientist-D, CPCB, RD, Kolkata-700107; sandeeproy.epcb@nic.in

With respect for necessary arrangement in Circuit house for the meeting

With request to participate in the preinspection meeting and field visit as per schedule

(M. K. Biswas)

ijdime/Head Office: utrin us.//Partvesh Sharran, udi arja mit/Enst Arjun Nagar ičrili/Deshi-110 032 gcuis/fet 011-431 02030, 22305792 desiigc/Website: www.cptb.nic.iii

with Filming Regional Directorate:

502, ROUNS WINDLY NO. SOUTHWAY CONTINUE EDW2 PRANTY IN TH. 1582, Haptanego Main Busel STREET, Kulkata - 70010 / TRUE Tai 013-2441 4679 \$ \$150-9500 relations as cost 1 000 miles

Date: 28.10.2024

Participants of Joint committee meeting constituted in compliance to NGT Order, (0.A-No. 976/2014) with DM (Aurangabad) on 28.10.24 at Circuit House, Aurangabad

SI.	Name (Shri)	Desig. & Deptt	Mob No	Signature
1.	Shrinant Shaston	DM Amangabad	9473191261	Q2
2.	Latil- bushan lamiga	ADM	9473191262	De 25/10
3.	(24)			
4.	Anun Kumar	Board Analyt	9771023486	Jule 10120
5.	Ratur Penjadaulimi	3.D.C	8340514201	The last
6.	Sandeep Roy	Scientist-D	9903816939	8528/10/
7.	Sandeep Nandi	Scientist B RO MOEFE Reno	9090465288	Ivan de
8.	Manysonym, Ko. Engl	18-0, 8-2-1-C-B	2.00	281624
9.	Sukhendu Biswas	Scientist B CPCB, Kolkata	9831056571	Many De Joon
10.	Darpore Lang	Manager (RIR) NTPC-NSTPS	7763816946	Desper 119
11.	V. Duly	CRABCLY	638743566	V.V
12.	Ray Thomas	AGM (HTZ)	965099 4520	A.
13.	Y. M.S Sunder	ASM TI BEBCL	9440918754	Ercons
14.	IPIL BAGE	AGM - FM .	9431215288	Horge
15.	Brijendra	AGM (TS) NAGCL	943160088	9 Moracan
16.	Pranesh Kuma	Dam (Ma)	941228164	an .
17.	B.J.C. SASTRY	CPO/BELL	9623017333	Bloomy
18.		HOP MAGCL	941534242	3 Chromonda
19.	Maniser	Dam (Chan)	965099377	4 14m.
20	Copy WALLAWAR	SYMH (EMG)	9446 4037f	Cay classon

Date: 28.10.2024

Participants of Joint committee meeting constituted in compliance to NGT Order, with DM (Aurangabad) on 28.10.24 at Circuit House, Aurangabad

SI.	Name (Shri)	Desig. & Deptt	Mob No	Signature
1.	DEBASISH BANEAJEE	NITPO (HEM	9434041526	
2.	Ashe her sint	AJH- MITHIN	2070193190	Z
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No. J-13012/127/2007-IA.II (T) Government of India Ministry of Environment, Forest and Climate Change

3º Floor, Vayu Biock, Indira Paryavaran Bhawan, Jot Bagh Road, Aliganj, New Delhi 110003 Dated: 20.3.2018

To:

The Chief Executive Officer, M/s Nabinagar Power Generating Co. Pvt. Ltd. 1st Floor, Vichyut Bhawan, Bailey Road, Patna-800 001, Bihar

Tel. No. 6612-2504010; Fax: 0612-2504098; E-mail: mpsmha1326@gmail.com.

Sub: 3x660 MW Super-Critical Technology Coal Based Nabinagar Thermal Power Plant at village Majhiyan, in Nabinagar Taluk, in Aurangabad District in Bihar by M/s Nabinagar Power Generating Company Private Limited-reg. extension of validity of EC.

Sir,

This has reference to your online application no. **IA/BR/THE/11929/2007** cated 14.10.2017, Ministry's letter dated 13.11.2017 and the documents furnished vide online submission dated 8.12,2017 regarding the above mentioned subject.

- 2. It is inter-alia noted that EC to the above project was accorded on 27.12.2010 which was valid for five years, i.e. till 26.12.2015. As per EIA amendment notifications nos. S.O.114(E) dated 29.4.2015 & S.O.2944(E) dated 14.9.2016 and Ministry's OM dated 12.4.2016, the validity of EC is presumed as seven years for the above mentioned project. Accordingly, the said EC is valid till 26.12.2017.
- 3. It has been noted that you have requested for extension of valinity of the sain EC for further period of two years, i.e. (ii) 26-12.2019. It has been informed by you that the project is in its advanced stage of development. Commissioning of Unit 1 (1x660 MW), Unit 2 (1x660 MW) and Unit-3 (1x660 MW) are scheduled in March, 2018, September, 2018 and March, 2019. The delay in scheduled implementation has been due to various issues majorly relating to delay in land acquisition, resettlement of homested owners, availability of raw material, availability of start-up power, frequent bandles, etc. which are beyond control of the company.
- 4. It has also been intormed through additional documents submitted vide dated 8.12.2017 that the ESP has been designed with 99.97% efficiency to achieve revised PM standard of 30mg/Nm3. Tencers for installation of Flue Gas Desulphurisation (FGD) were scheduled to be floated on 30° November. 2017 and is expected to be awarded by 31° March. 2018. FGD will be implemented in about 30 months for first unit followed by 3 months' interval for subsequent units. There is no proven technology for meet the revised norms. Pilot testing of technologies is to be carried out and based on the results (Expected by June, 2018), De NOs systems will be implemented. Revised estimated project cost is Rs. 15131.67 crores. The commensurate Capital CSR Budget is Rs. 60.53 crores.

-35<u>/</u>_

- The matter regarding extension of validity of EU was placed before the Expert Appreisal Committee (Thermal Power) in its 41th Meeting held on 26.10.2017. In acceptance of the recommendations of the EAC and in view of the mformation/documents furnished by you, the Ministry hereby extends the validity of EC dated 27.12.2010 for further period of two years, i.e. till 26.12.2019 (total 9 years from the date of issue of EC] subject to the following additional conditions.
 - Revised emission standards as per the Ministry's notification dated 97.12.2015 and subsequent amendments notified from time to time shall be complied. In case, plant is ready for commissioning and not meeting revised emission horms, operations shall be stopped unless oftension an extension is given to the said power plant through a specific direction or an amundment to the Notification.
- The commensurate Capital CSR Budget is Rs. 60,53 erores as per the ii. revised Project Cost Rs. 15.131.67 Crores which shall be spent on CSR activities in the surrounding villages as per the action plan submitted by уоц.

This issues with the approval of the Competent Authority.

Yours faithfully,

(Dr. S. Kerketta) Director [[A,I]]

Copy to:

- 1. The Secretary, Ministry of Power, Shram Shakri Bhawan, Rafi Marg, New Delbi 110001.
- 2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delh#-110066
- 3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD cum-Office Complex, East Arjun Nagar, Delhi- 110032.
- 4 The Additional Principal Chief Conservator of Forests [C]. Ministry of Environment, Forests and Climate Change, Regional Office (ECZ), Bungalow No. A-2, Shyamali Colony, Ranchi – 834002,
- 5. The Principal Secretary, Environment & Forest Department, Good of Bihar, Aranya Bhawan, Riding Road, Patua-14.
- The Chairman, Bibar State Pollution Control Board, Parivesh Bhawari, Plot no. NS-B/2, Palipurra Industrial Area, Padiputra, Palna (Bihar) - 800 023.
- The District Collector, Collectorate Office, Aurangabad, Bihar 824101.
- Guard file/Monitoring file.
- Website of MoEF&CC.

(Dr. S. Nerkerta) Director (IA I)

okerhold.



No. J-13012/127/2007-IA.II (T) Government of India Ministry of Environment, Forest and Climate Change

3rd Floor, Vayu Block, Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi-110003

Dated: 14.01.2020

To

The Chief Executive Officer
M/s Nabinagar Power Generating Co. Pvt. Ltd
(A wholly owned subsidiary of M/s NTPC Ltd.)

1st Floor, Vidhyut Bhawan, Bailey Road, Patna-800001, Bihar.

Tel. No. 0612-2504010; Fax: 0612-2504098; E-mail: mpsinha1326@gmail.com

Sub: 3x660 MW Super-Critical Technology Coal Based Nabinagar Thermal Power Plant at Village Majhiyan, Nabinagar Taluk, Aurangabad District, Bihar by M/s Nabinagar Power Generating Company Private Limited-reg. extension of validity of EC.

Sir.

This has reference to your online application No. IA/BR/THE/11929/2007 dated 21.10.2019 for extension for Environmental Clearance (EC) dated 27.12.2010 for further period of one year. The EC was initially valid for five years (till 26.12.2015). Further EIA amendment Notification dated 29.4.2015 increased the validity of EC to seven years. As the said EC was valid on the date of publication of the Notification, EC automatically get extended upto seven years (till 26.12.2017). Subsequently, the EC was further extended for two years (till 26.12.2019) vide Ministry's letter dated 20.3.2018.

- 2. It has been noted that you have requested for extension of validity of the said EC for further period of one year, i.e. till 26.12.2020. It has been informed that Unit-1 (1x660 MW) was commissioned on 6.9.2019. Further, Unit-2 (1x660 MW) and Unit-3 (1x660 MW) are in advanced stage of commissioning which are scheduled be to commissioned on 30.03.2020 and 20.12.2020 respectively.
- 3. It has been informed that the delay in scheduled implementation has been delayed due to various issues majorly relating to delay in Land acquisition for Make-up water, Railway Siding, Ash Dyke, CHP area, Switchyard, Cooling Tower. Acquisition process also delayed due to New Land Acquisition Act 2014, NCLT Order against Ash Handling & SG Civil Agencies, NGT ban on sand mining, Termination of contract for site levelling, Delay in availability of start up power, frequent Law and order issues in the area due to local/naxal bandhs. Further, this project is located in the Aurangabad of Bihar which is a LWE notified district, which are beyond the control of the company.
- 4. It has been informed that the amount of Rs. 13,966 Crore (till September, 2019) had already been spent on the development of the project. The estimated Project Cost at the time of grant of Environmental Clearance was Rs.9,568.27 Cores. The revised project cost has been estimated to be Rs.17,304 Cores out of which an amount of Rs.925.22 Crores has been earmarked for installation of FGD

to meet new emission norms. The FGD package was awarded on 14.6.2019 and expected to be operationalize by 31.10.2021.

- 5. The matter regarding extension of validity of EC was placed before the Expert Appraisal Committee (Thermal Power) in its 35th Meeting held on 14.11.2019. In acceptance of the recommendations of the EAC in its meeting held on 14.11.2019 and in view of the information/documents furnished by you, the Ministry hereby extends the validity of the Environmental Clearance dated 27.12.2010 for further period of one year (w.e.f. 26.12.2019 till 25.12.2020, total 10 years from the date of issue of EC) subject to the following additional conditions.
 - The details of Technology selection for adoption of FGD for control of SOx shall be submitted. In case of wet FGD, details regarding source of limestone, impact of transportation, handling, storage and disposal of Gypsum including land requirement shall be submitted.
 - In case SCR/SCNR is not adopted, an alternate technology analysis and justification of Technology Selection for NOx reduction is to be submitted.
- Progress (physical and financial) of construction power plant till its commissioning, installation of FGD and De-NOx measures shall be submitted as a part of six monthly compliance report.
- iv. Emission norms and specific water consumption as per the Ministry's norms dated 7.12.2018 and 28.6.2018 shall be complied with. As committed, Flue-Gas Desulphurisation Unit and Selective Catalytic Reactor to control SO₂ and NO_x respectively shall be installed.
- v. Water requirement for FGD to be installed in the existing units has to provided. Therefore, water balance to be modified based on the water requirement for whole units including a plan on ZLD.
- vi. The stack emissions (minimum, maximum, average and 98% percentile) shall be submitted for the period of six months in the compliance report. Further, daily water withdrawal, consumption, power generation and average PLF shall be submitted. The specific water consumption per MWhr shall be calculated based on water consumption and power generation and to be submitted in the compliance report.
- vii. The plant shall operate only after meeting the new emission norms as notified by the Ministry. Else, extension of timelines from the CPCB for implementing pollution control measures for meeting new norms shall be obtained and a copy of the same shall be submitted to the Ministry.
- All other conditions stipulated in the EC dated 27.12.2010 and Ministry's vide letter dated 20.3.2018 remain the same as applicable.

This issues with the approval of the Competent Authority.

Yours taithfully,

(Dr. S. Kerketta) Director (IA.I)

Copy to:

- The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
- The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
- The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- The Deputy Director General of Forests (C), Ministry of Environment, Forests and Climate Change, Regional Office (ECZ), Bungalow No. A-2, Shyamali Colony, Ranchi – 834002.
- The Principal Secretary, Environment & Forest Department, Govt. of Bihar, Aranya Bhawan, Riding Road, Patna-14.
- The Chairman, Bihar State Pollution Control Board, Parivesh Bhawan, Plot no. NS-B/2, Paliputra Industrial Area, Patliputra, Patna (Bihar) - 800 023.
- The District Collector, Collectorate Office, Aurangabad, Bihar-824101.
- 8. Guard file/Monitoring file.

Website of MoEF&CC.

Director (IA.I)

Monitoring Report of NTPC Nabinagar

Compliance status as Observed during Monitoring on 28.10.2024

S.No	Special Conditions	Compliance status as observed during
		monitoring on 28.10.2024
SC-01	Vision document specifying prospective	Complied.
	plan for the site shall be formulated and submitted to the Ministry within six months.	Vision documented has been formulated and submitted to MOEFCC
SC-02	Land requirement shall be restricted to 1500	Read as Below:
	acres (including ash pond).	As per report,
		Total Land Acquired = 2972 Acres
		• Stage I - (3x660MW)- Around 1500 Acre (including Ash Pond), Under execution.
		• Stage II- (3x800MW) - around 1472 acres
		Proposed.
		• Forest land 7.3875 ha (18.24 acres) has been allocated.
SC-03	Provision for installation of FGD shall be	Read as below:
	provided for future use.	As per report FGD contract awarded to M/s
		BHEL. Work is under progress. Being complied.

SC-04	High Efficiency Electrostatic Precipita 39	Being Complied.
	(ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm³. Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	 ESP with efficiency of 99.97% is operational in running units to limit PM emission <30 mg/Nm³. Provision has been made for dust extraction system in coal handling area and ash handling areas including transfer points as well as other vulnerable dusty areas and being provided as observed.
SC-05	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5 % and 34 % respectively at any given time. In case of variation of coal quality at any point of time fresh reference shall be made to MoEF for suitable amendments to environmental clearance condition wherever necessary.	Read as below:- As per analysis reports some values have exceeded. But as per MOEF&CC notification dated 21.05.2020 TPP may use coal without any stipulations as regards ash content or distance.
SC-06	Stack of 275 m height shall be installed and provided with continuous online monitoring equipment for SOx, NOx and Particulate Matter. Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack may also monitored on periodic basis.	 Being complied 275 m stack has been provided with continuous online monitoring system for SO_X, NO_X and PM. Exit velocity ≥ 22 m/sec is being complied. Hg Emission Monitoring is being carried out offline and online Hg analyser has also been installed and commissioned in Unit # 1, Unit # 2, and Unit # 3 Stacks. Values are within limit.
SC-7	Existing de-generated water bodies (if any) in the study area shall be regenerated at the project proponent's expenses in consultation with the state Govt.	Complied. The study has been conducted by M/s Geoscience Consultancy Services Roorkee. Final report yet to

	40	be submitted. There are no degenerated water
		bodies which exist in the plant vicinity.
SC-8	Detailed hydro-geological study shall be conducted (including sustainability of water source study) shall be carried out by an institute of repute and report submitted to the Regional Office (RO) of the ministry. Further hydro-geological study shall be reviewed annually from an institute/ organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case and deterioration is observed specific mitigation measures shall be undertaken and reports/ data of water quality monitored regularly and maintained shall be submitted to the RO of the Ministry.	Complied. Hydro-geological study of NSTPS Nabinagar has been conducted by National Institute of Hydrology, Roorkee in 2019. Report of study has been submitted. Hydro-geological study is being carried out by M/s Geoscience Consultancy Services Roorkee Vide PO No. 4000303494 dated 31.03.2023. Final report will be submitted once the study is completed. No deterioration of water quality has been observed as per the study.
SC-9	Source of water for meeting the requirement during lean season shall be specified and submitted to the Regional Office of the Ministry within three months.	Complied. The source of the water is from Indrapuri Barrage on Sone River.
SC-10	No ground water shall be extracted for use in operation of the power plant even in lean season.	Read as Below: Ground water is not being extracted for operation of units under any circumstances.as stated.
SC-11	No water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.	Complied No water bodies have been disturbed due to setting up and operation of NSTPS units as observed.

SC-12	Minimum required environmental flow	Complied
5C-12	suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.	The quantity of water drawn for Nabinagar STPS from Indrapuri Barrage shall be limited to committed quantity for the project by State Govt. and therefore minimum required environmental flow shall be maintained. Environmental flow is maintained as per Bihar govt agreement dated 09.10.2017.
SC-13	COC (Cycle of Concentration) of 5.0 shall be adopted. The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	Partially Complied. Treated effluents are recycled and reused Zero liquid discharge is being followed. COC 4.2-4.5 is being adopted at present. A sewage treatment plant has been installed and operational and the treated sewage is being sent to horticulture using for raising greenbelt/plantation.
SC-14	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation. Additional soil for leveling of the proposed	Complied
50-14	site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Has been complied during construction Phase. As stated.
SC-15	Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the	Being complied. System for 100% extraction of dry fly ash along with suitable storage facilities has been designed.

Regional Office of the Ministry from the	A utilization plan has been made for 100% fly ash
to time.	utilization and all efforts are being made for 100 % ash utilization. As stated at present Fy 2024-25 80% being done. As per report this is 3rd year of operation.
SC-16 Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	Being complied Dry Fly Ash Extraction system (DAES) is under operational which collects 100% fly ash in dry form however, dry ash transportation by railway wagons is under construction. Unutilized fly ash shall be disposed through High Concentrated Slurry Discharge (HCSD) and bottom ash through normal slurry mode. Heavy metal monitoring of bottom ash is being carried out periodically and results are within limit for all 3 units carried out by M/s Vardan. Heavy metal monitoring of Ash Pond effluent shall be carried out once as pond effluents are discharged, as stated.
SC-17 Ash pond shall be lined with HDP/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	 Being complied. Ash pond 1 has HDPE lining, ash pond 2&3 do not have HDPE lining but have bentonite clay layer at base. NSTPS has different systems for disposal of Fly ash and bottom ash: High Concentration Slurry Disposal System (HCSD) for fly Ash (Lagoon-I). Wet Slurry Disposal with Ash Water Recirculation for Bottom Ash. (Lagoon – II &

In HCSD lagoon (01 No), the disposed layers of ash are solidified, therefore leaching from HCSD lagoon is minimal.

In one bottom ash lagoon, 300 mm thick high concentrated slurry is spread to make it impervious and in another BA lagoon 0.3m thick impervious liner of soil blended with bentonite to achieve a permeability <1X10⁻⁶ cm/sec is provided. Various instruments (Piezometers, water level sounders, settlement markers) are installed in body of Ash Dyke at various locations monitoring the health of ash dyke embankment. The supernatant from the Ash Dykes is recycled back to the plant to ensure minimum water inside ash dyke. Adequate safety measures have already been incorporated at design & construction level to prevent dyke from breaching. Operational and preventive measures are in practice to prevent any occurrence of breaching.

SC-18

Disposal of Bottom Ash in abandoned mines (if proposed to be undertaken) shall be carried out only after obtaining permission from DGMS(Directorate General of Mines Safety) and it shall be ensured that the bottom and sides of the mined-out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity.

Complied.

Noted and disposal of Bottom Ash in abandoned mines is not being carried out at present. At present, ash is being sent to NHAI for GT road 6 lane construction at 2 locations (north & south)

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SC-19	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised, and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 75 %.	Being complied. Green belt has been developed with plantation of native species with specified tree density and survival rate by Forest Department, Govt. of Bihar width 100 m at 2 locations. Approx. 1,47,500 Saplings have been planted under mass afforestation program with survival rate more than 75%. Tree density is 2500 /ha survival rate is more than 75%.
SC-20	The project proponent shall also adequately contribute in the development of the neighboring villages. Special package with implementation schedule for providing fluoride free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	Partially Complied. As per Hydro-Geological Study by NIH, Roorkee, the concentration of fluoride is within the prescribed limit (i.e. 1.5 mg/L) for drinking water requirement in surface water nearby NSTPS project area. However, as per NSTPS Nabinagar, R&R community development scheme, requisite amount has been deposited to Public Health Engineering Department (PHED), Aurangabad for installation of 110 hand pump for safe and clean drinking water in the nearby villages and 90% work is completed.
SC-21	Further an amount of Rs 60.53 Crores shall be earmarked as one-time capital cost for CSR program as committed by the project proponent. Subsequently a recurring expenditure of Rs 10.40 Crores per annum shall be earmarked as recurring expenditure	Partially complied. As per the approved Community development (CD) plan under R&R scheme, work has been undertaken for 51.73 Crores value upto FY 2023-24. Further proposal for 7.41 crores, CD activities

for CSR activities. Details of the activities				
to be undertaken shall be submitted within				
six months along	with	road	map	for
implementation.				

is under pipeline for award of the work in FY 2024-2025. For Balance amount 1.38 Cr, activities are under finalization with stakeholders and District administration. Some works are due for execution. partially complied.

SC-22 While identifying CSR activities it shall be

ensured that need based assessment for the nearby villages within study area shall be conducted to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people shall be undertaken. Special scheme for Bidi workers of Solapur shall be formulated. Development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such program.

Company shall provide separate budget for community development activities and income generating programs. Vocational training program for possible self-employment and jobs shall be imparted to identified villagers free of cost.

Partially complied.

The suggested activities are included in the approved CD plan by DM, Aurangabad for its implementation based on need-based assessment. NSTPS, Nabinagar sponsored to 30 youths for skill development program at CIPET Hajipur, Agro based training like vermicomposting provided to 50 PAPs and Bee keeping training & honey production and Amrit Krishi training has been provided to 50 PAPs each training and reimbursement of tuition fees for ITI course to the 115 PAPs/their wards. In future, Agro based training shall be imparted as a part of CD plan. Vocational training for skill development to villagers and sewing training provided to girls in the villages. Different Infrastructure need based projects are also being undertaken such as construction of Chhath ghats, community halls etc. at panchayat level. Some works are under progress.

SC-23

Shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project

Partially complied.

NSTPS/NTPC Limited has in-built own system for monitoring and implementation of the complete CSR/R&R Community Development Plan at the Unit Level, Region level and corporate

	proponent shall also submit the status implementation of the scheme from time to time.	level. A specific social audit shall be undertaken and Purchase order issued . as stated.
	General Co	nditions
GC-1	A well-designed rainwater harvesting shall be put in place before commissioning of the plant. Central Ground water Authority / Board shall be consulted for finalization of appropriate rainwater harvesting technology/design within a period of three months from the date of this clearance and details shall be furnished.	Approval of Central Ground Water Board (CGWB) has been granted for construction of Rainwater harvesting (RWH). Four Nos recharge shafts (borewell) of RWH completed in Plant area near raw water Pump House and Two Nos. recharge shafts (borewell) of RWH in Township completed.
GC-2	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Complied, Provision for adequate safety measures is being implemented as stipulated. Details of safety measures and plant lay out have been submitted to this office.
GC-3	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives - Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in	Complied. License for storage of LDO has been granted by department of Explosive, Nagpur on 16.10.2018 and is valid upto 31.12.2026. Sulphur content in the liquid fuel does not exceed 0.5%. as per report. On-site Disaster Management Plan has been prepared and approved for implementation.

	case of an accident taking place due to	
	storage of oil.	
GC-4	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg,Cr,As,Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not	Being Complied. Sample have been collected for borewells. analysis has been done by M/s Vardaan. Values are within limit. Ash pond area has been done. Ground water quality has not been adversely affected as per report.
GC-5	Monitoring of surface water quantity and quality shall also be regularly conducted, and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Being complied Surface water analysis report shows values within limits. Monitoring for heavy metals in ground water has been done.
GC-6	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Being Complied. First Aid and sanitation arrangements have been made for the drivers and other contract workers. Toilets and drinking water arrangement are being made at main plant area.
GC-7	Noise levels emanating from turbines shall be so controlled such that the noise in the	Being Complied

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work zone shall be limited to 75 dBA.
people working in the high noise area,
requisite personal protective equipment like
earplugs/earmuffs etc. shall be provided.
Workers engaged in noisy areas such as
turbine area, air compressors etc. shall be
periodically examined to maintain
audiometric record and for treatment for any
hearing loss including shifting
to non noisy/less noisy areas.
Regular monitoring of ambient air ground
level concentration of SO ₂ , NOx, PM _{2.5} &
PM ₁₀ and Hg shall be carried out in the
impact zone and records maintained. If at

Noise level monitoring being done. From turbine and other high noises areas. Requisite Personal protective equipment being ensured, and training imparted, and requisite training being imparted. Periodical examination of workers being carried out working in high noise area.

GC-8

impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.

Being Complied

AAOM at specified 04 locations is being carried out regularly. AAQM report shows values pf all 4 no's of stations are within limits. 4 no's of online Ambient Air Quality station have already been Installed (in consultation with pollution control board) and commissioned and all are operational.

GC-9

Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

Complied.

Housing of construction labour (as applicable) with all necessary infrastructure and facilities are being provided within the site by concerned agencies as per contract.

GC-10	The project proponent shall advertise in a	Complied.
GC-10	The project proponent shall advertise in a least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at	Complied. It has been advertised and copies submitted.
	Website of the Ministry of Environment and Forests at http://envfor.nic.in .	
GC-11	A copy of the clearance letter shall be sent by the proponent to concern Panchayat, Zila Parisad/ Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	All three Units in operation. NPGCL Nabinagar is now merged with NTPC Ltd. named as Nabinagar Super Thermal Power Station (NSTPS). Data uploading on NTPC website has been done.EC letter submitted to urban local bodies and uploaded in NTPC website as shown by documents produced.
GC-12	An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the head of the Cell shall directly report to the head of the organization.	Being Complied. An Environment Cell known as Environment Management Group (EMG) has already been created and functional at site. Constituted members are 1. Sh.Brijendra Agrawal (AGM TS-EMG) 2. Sh. Gopi Challawar (Sr. Mgr EMG) 3. Sh. Ashok Kr Singh(Asst.Mgr EMG)
GC-13	The proponent shall upload the status of compliance of the stipulated environmental	Being Complied.

clearance conditions, including results Environment data Being displayed at main gate monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF. the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely, SPM. **RSPM** $(PM_{2.5} \&$ PM_{10}), SO₂, NO_x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain. environment statement for each financial year ending 31st March in Form-

also, it is uploaded in NTPC website and being submitted to RO ,SPCB,CPCB.

GC-14

V as 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 put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.

Being complied.

Environmental Statement Submitted to MOEF&CC and BSPCB on dated 22.09.2023.

GC-15

The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of

Being complied

Last six monthly report on status of the implementation of stipulated environmental safeguards was submitted on 31.12.2023 to MOEF&CC Regional Office, Central Pollution Control Board and State Pollution Control Board.

compliance of the environment of environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.

Last status of compliance of the environmental clearance conditions was uploaded on company website. It is accessed from the https://ntpc.co.in/about-us/corporate-functions/environment/status-hyc-reports

Half Yearly EC Compliance report for the period of Oct 2023 to March 2024 has been submitted,

All three Units in operation. NPGCL Nabinagar is now merged with NTPC Ltd. named as Nabinagar Super Thermal Power Station (NSTPS). Data uploading on NTPC website has been done and being updated the same periodically.

GC-16

Regional Office of the Ministry Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponents will up-load the compliance status in their website and up-date the same from time to time at least six-monthly basis. Criteria pollutants levels including NO_x (from stack & ambient air)

Being Complied.

The above project was monitored by Sh. Sandeep Nandi-Scientist B on 28.10.2024. Compliance report is being submitted regularly as per schedule. Environmental Impact Assessment Report has already been submitted to Regional office & Environment Management Plan / Environment Statement has been submitted to MoEF&CC. Display Board has been installed at the main Gate of the Power Plant. Real Time Environment Monitoring data is being displayed.

	5 9	
	shall be displayed at the main gate of power plant.	
GC-17	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. This cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Being Complied. An amount of Rs.992.48 Crores have been earmarked in the Feasibility Report for Nabinagar STPP towards environmental measures like ESP (267.27cr), Chimney (95.45cr), Cooling System (141.31cr), Ash Handling and Disposal (370.80cr), Effluent Treatment (39.66cr), Sewage Treatment (5.64cr), Dust Extraction and Suppression System (2.66cr), ZLD (9.05cr), Fire Fighting (30.43cr), Green Belt and Afforestation (6.83cr), DM Plant Waste treatment System (22.38cr), Env. Lab equipment (1.0cr) Various system are under implementation at site as observed.
GC-18	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start	Read as Below: Investment approval for the project was accorded by Board of NTPC Limited on 21.01.2013. The first, second and third Unit has been commissioned and commercial operation has

	<u></u>	
	of land development work	been started from 6 th Sep'2019, 23 rd July'2021
	commissioning of plant.	and 01st Jun'2022 respectively.
GC-19	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.	Being Complied .
	ADDITIONAL CONDITIONS	(J-13012/127/2007-1A.II(T)
AC-1	The details of technology selection for adoption of FGD for control of SO _X shall be submitted. In case of wet FGD, details regarding source of limestone, impact of transportation, handling storage and disposal of Gypsum including land requirement shall be submitted.	FGD is under construction at present.
AC-2	In case SCR/SCNR is not adopted, an alternate technology analysis and justification of technology selection for NOx reduction is to be submitted.	Being Complied. For NOx reduction system: The boiler is of sliding pressure supercritical, once-through type, utilizing a Tangential Firing System for NOx control in addition with SOFA (Separated Over Fire Air) and COFA (Close-coupled Over Fire Air) system. Above technology is being used as stated.
AC-3	Progress of construction power plant till its commissioning, installation of FGD and	FGD under construction at present.

	De-Nox measures shall be submitted a	
	part of six-monthly compliance reports.	
AC-4	Emission norms and specific water	
AC-4	1	ECD (: 1 · 1
	consumption as per ministry norms dated	FGD erection work is under progress.
	07.12.2018 and 28.12.2018 shall be	
	complied with. As committed, Flue gas	
	desulphurization unit and selective catalytic	
	reactor to control SO ₂ and NO _X respectively	
	shall be installed.	
AC-5	Water requirement for FGD to be installed	Being Complied .
	in the existing units has to be provided.	
	Therefore, water balance to be modified	Water balance diagram has been submitted.
	based on the water requirement for whole	
	units including a plan on ZLD.	
AC-6	The stack emissions (min, max, average and	Being Complied .
	98 percentile) shall be submitted for the	Stock amission data for compliance maried has
	period of six months in the compliance	Stack emission data for compliance period has
	report. Further daily water withdrawal,	been submitted all values within limits as per the
	consumption, power generation and average	report. Data table shows progressive decrease of
	PLF shall be submitted. The specific water	specific water consumption.
	consumption per MWhr shall be calculated	
	based on water consumption shall be	
	submitted in the compliance report.	
AC-7	The plant shall operate only after meeting	At present FGD is under construction.
	the new emission norms as notified by	
	ministry. Else, extension of timelines from	
	CPCB for implementing pollution control	
	measures for meeting new norms shall be	
	obtained and copy of the same shall be	
	submitted to Ministry.	
1		1

As per monitoring done on 28.10.2024 by the undersigned, and review of monitored data reports submitted along with the half yearly EC compliance report for period 01.04.2024 to 30.09.2024, the following partially complied conditions have been detected, and these have been highlighted in bold in above report, and the are listed as follows:-

- 1. COC 4.2-4.5 is being adopted at present, instead of 5.0 as prescribed in the stipulated condition which has not been achieved so far.
- 2. 90% work involving installation of hand pumps is complete till now.

BIHAR STATE POLLUTION CONTROL BOARD

BELTRON Bhawan, Shastri Nagar, Patna 800 023 EPABX 0612-2281250/2282265, Fax 0612-2281050

11-mail bspcba vsnl.net, website http://bspcb.bih.nic.in

Ref.No :- PT(NOC)- 1008/09-

Patna, Dated -

NOC UNDER SECTIONS 25/26 OF THE WATER (PREVENTION & CONTROL OF POLLUTION) ACT, 1974 AND UNDER SECTION 21 OF THE AIR (PREVENTION & CONTROL OF POLLUTION) ACT, 1981.

Reference application no. 33293, dated: 22.02.2011 of M/s Nabinagar Power Generating Company Pvt. Ltd. (A Joint Venture of NTPC Ltd. & Bihar State Electricity Board), 1st floor, Vidyut Bhawan-II, Bailey Road, Patna-800001(Bihar) for setting up Nabinagar Super Thermal Power project (3x660MW) in Blocks-Barun and Nabinagar, Distt- Aurangabad. Cost of the project is 129645.77Million rupees.

2. AFTER CONSIDERING:

- (i) The facts stated in their Application & Project report;
- (ii) Bihar State Pollution Control Board's Notification No. 26. dated 08.11.2003;
- (iii) Provisions of the Water (Prevention and Control of Pollution)Act. 1974 and the Air (Prevention and Control of Pollution)Act. 1981.
- (iv) The Environment Clearance from Ministry of Environment &Forests, Govt of India vide its ref. no. J-13012/ 127/ 2007 IA II(T), dated: 27th December, 2010.

3. NOC IN FAVOUR OF THE PROPONENT AT THE SAID SITE IS HEREBY ACCORDED SUBJECT TO THE FOLLOWING CONDITIONS:

- (i) The unit shall obtain consent to operate under sections 25 & 26 of the Water Act, 1974 and u/s 21 of the Air Act, 1981 prior to commissioning of the plant from Bihar State Pollution Control Board
- (ii) The effluent (Domestic & Trade) and emission, if any, shall conform to the standard as prescribed by the Board.
- (iii) That, they shall comply with all the conditions prescribed in the Environment Clearance (EC)
- (iv) The height of exhaust pipe of the D.G. set shall be as prescribed by the C.P.C. Board and the noise level shall be within the prescribed standard.
- Stack of 275m height shall be installed with the provision of continuous online monitoring equipment as per the EC



- (vi) High efficiency E.S.Ps shall be installed to achieve to ensure emission of particulate matter does not exceed 50mg/Nm³. Adequate pollution control devices shall be provided in dusty areas as in the EC.
- (vii) Fly ash shall be collected in dry form and storage facility (silo) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals will be monitored in bottom ash and in the effluent as per the EC. No ash shall be disposed off in low lying area.
- (viii) Ash pond shall be constructed as per the EC.
- (ix) Disposal of bottom ash in abandoned mines, if any, shall be as per the EC.
- (x) Demand of water shall be met as per the EC.
- (xi) The Treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. A Sewage Treatment plant shall be provided as per the EC.
- (xii) Analysis of the raw and treated effluent shall be carried out regularly and report shall be submitted to the Board monthly.
- (xiii) Regular monitoring of Ambient Air quality shall be carried out as specified in the EC.
- (xiv) The unit shall implement all the decisions taken in the Public Hearing conducted at SonNagar (Barun), Aurangabad on 12,03,2010.
- (xv) Compliance report of above conditions shall be submitted to the Board quarterly.
- (xvi) Tree plantation shall be done in 100m width as specified in the EC.

NOTE

- Bihar State Pollution Control Board reserves the option to revise and add other conditions, if necessary, for protection of environment in general and for pollution control Board in particular.
- The present NOC should not be construed as an assurance for the grant of 'Consent-to-Operate' the proposed plant but shall be subject to compliance of all the conditions indicated above.
- 3. The NOC is valid for a period of 36 months from the date of issue.

4. Issued by the order of competent authority.

(M.K.Singh) Member-Secretary

Memo No. - Patna, Dated P///
Copy to M/s Nabinagar Power Generating Company Pvt. Ltd. (A Joint Venture of NTPC Ltd. & Bihar State Electricity Board), 1st floor, Vidyut Bhawan-II, Bailey Road, Patna-800001(Bihar)/ AEE, Patna for information and necessary action.

(M.K.Singh) Member-Secretary

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BIHAR STATE POLLUTION CONTROL BOARD

BIHAR

Parivesh Bhawan, Industrial Area, Patliputra, Patna – 800010 Ref. No- 1839 Patna, dated- 15-1

EMISSION CONSENT ORDER

Patna, dated- 15-6-2022

With reference to the Online application ID. 5853525, dated 26.04.2022, of M/s Nabinagar Super Thermal Power Project (3x660 MW), Vill-Majhiyawan, P.O.-Ankorha, Distt.-Aurangabad for consent under sections 21 of the Air (Prevention & Control of Pollution) Act, 1981, he/they is/are granted consent to operate his/their thermal power plant at Vill-Majhiyawan, P.O.-Ankorha, Distt.-Aurangabad for the capacity Power Generation (3x660 MW) for the period of five years from the date of issue with the following conditions:-

- That, he/they shall not make any alteration, addition, deletion or modification in the plant without the prior clearance from the Board and shall also abide by the obligations under sections 22,23 and 31A of the Air (Prevention & Control of Pollution) Act 1981 and further shall extend co-operation to the Board in performing its functions entrusted under sections 24,25 and 26 of the Act;
- That, he/they shall comply with the requirements of rule14 of the Environment (Protection)
 Rules, 1986; rules 4,5,7,9,10 and 11 of the Hazardous and other Wastes (Management
 and Transboundary Movement) Rules,2016; rules 4,5,7,8,10,11,12,13,15,17 and 18 of the
 Manufacture, Storage and Import of Hazardous Chemical Rules,1989, and the provisions
 of the Public Liability Insurance Act, 1991, whichever is applicable;
- That, he/they shall monitor his/their emission(s) and the ambient air quality from representative point regularly and shall maintain its quality in conformity with Board's standards and shall produce its proof, as and when asked for;
- That, he/they shall submit application for consent again 30 days before the expiration of the period of consent or within 30 days from the date of receipt of this order, whichever is applicable.
- That, they shall comply with the provisions (whichever applicable) of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and Rules and Notifications issued there under. The quality of emissions shall comply with the standards as prescribed under the Rules;
- That, they shall comply with the conditions (whichever applicable) of the environmental clearance issued by MoEFCC, Govt. of India vide dated 27.12.2010/14.01.2020 and submit the compliance report accordingly to the Board;
- That, they shall provide adequate air pollution control devices (APCD-ESP/Bagfilter etc) to meet the boiler stack emission etc to be within prescribed limit.
- That, they shall comply with the standards as per notifications of MoEFCC, Govt. of India dated 02.01.2014, 07.12.2015, 07.03.2016, 28.06.2018, 19.10.2020 etc or as amended and as prescribe under the rules (whichever applicable) and point wise compliance report shall be submitted quarterly to the Board;
- That, they shall comply with the provisions made under Notification of MoEFCC. Govt. of India vide dated 14.09.1999 and as amended as on today for utilization of fly ash generated from thermal power plant and report shall be submitted accordingly to the Board:
- That, continuous online (24x7) monitoring system for emission should be maintained and connected to CPCB & BSPCB server for data transfer.
- That, the unit shall install Flue Gas Desulphunization (FGD) system with 3 months to comply SO₂ emission level.

- 12. That, dust material/fly ash collected in APCD shall be disposed in proper manner and it shall not be disposed off on road side outside the campus. They shall submit ash disposal and management plan to the Board;
- That, they shall provide adequate water sprinkling arrangement on ash dyke to suppress fugitive emission of dust and maintain proper safety arrangement with display board, lighting etc;
- That, they shall maintain continuous ambient air quality monitoring system and data should be transferred to CPCB & BSPCB server;
- That, they shall improve housekeeping of the plant area specially areas of all ETPs and submit quarterly report to the Board;
- That, they shall provide adequate water sprinkling arrangement on the road inside the campus & surrounding roads to suppress fugitive dust emissions;
- 17. That, diesel generating sets (DG Sets, if any), as source of backup power should be provided with an integral acoustic enclosure and the maximum permissible sound pressure level for new D.G. set shall be 75 dB(A) at 1 meter from the enclosure surface. The height of exhaust of DG sets should be as, Exhaust Stack Height formula:- (Ht of Building in meter + 0.2√KVA) m; it should be installed on pucca base with anti-vibration pads;
- 18. That, they shall ensure all possible measures to be implemented to control noise pollution and the ambient noise levels should conform to the standards prescribed under the Noise Pollution (Regulation and Control) Rules, 2000, as amended to date viz. 75 dB(A) during day time and 70 dB(A) during night time;
- 19. That, they shall comply with the provisions (whichever applicable) of the Solid Waste Management Rules, 2016. Separate wet and dry bins must be provided and segregation of dry (in blue bin), wet (in green bin) and domestic hazardous waste (in black bin) must be ensure; wet waste must be composted inside the premises and dry & domestic hazardous waste shall be handed over to the local body Non-biodegradable waste and dry waste like rejected corrugated cardboard, waste paper etc may be handed over to the recyclers registered with Bihar State Pollution Control Board;
- That, tree plantation in vacant space of the campus shall be done to develop as green belt and to control ecology of area surrounding the unit;
- That, the environmental statement for each financial year ending the 31st Sept., in Form-V
 as is amended to be submitted by the proponent to the Board as prescribed in the
 Environment (Protection) Rules, 1986;
- That, they shall make provisions for display of data outside main factory gate about quantity and quality of water discharge and air emission along with solid waste generated within the factory premises;
- That, notwithstand any thing stated above, the applicant unit shall abide by all the provisions of the environmental laws including policies and guidelines made there under;

To,
Sri Raj Kumar Pandey, CEO,
M/s Nabinagar Super Thermal Power Project, (3x660MW),
Vill-Majhiyawan, P.O.-Ankorha,

Distt.-Aurangabad

(S.Chandrasekar) Member-Secretary



BIHAR STATE POLLIGOON CONTROL BOARDURE XI

Parivesh Bhawan, N.S.B.-2, Patliputra Industrial Area, Patliputra, Patna - 800 010

Ref.no- 1840

DISCHARGE CONSENT ORDER

Patna, dated- 75-6-2022

With reference to the online application ID. 5853525, dated 26.04.2022, of M/s Nabinagar Super Thermal Power Project (3x660 MW), Vill-Majhiyawan, P.O.-Ankorha, Distt.-Aurangabad for consent under sections 25/26 of the Water (Prevention & Control of Pollution) Act, 1974, he/they is/are granted consent to bring into use his/their new/altered/existing outlet(s) for discharge of trade effluent and/or domestic sewage thermal power plant at Vill-Majhiyawan, P.O.-Ankorha, Distt.-Aurangabad for the capacity Power Generation (3x660 MW) for the period of five years from the date of issue with the following conditions:-

- That, he/they shall not make any alteration, addition, deletion or modification in the plant without the prior clearance from the Board and shall also abide by the obligations under sections 24,31 and 33A of the Water (Prevention & Control of Pollution) Act, 1974 and further shall extend co-operation to the Board in performing its functions entrusted under sections 20,21,23,30 and 32 of the Act;
- That, he/they shall comply with the requirements of rule14 of the Environment (Protection) 2 Rules, 1986; rules 4,5,7,9,10 and 11 of the Hazardous and other Wastes (Management and Transboundary Movement) Rules 2016; rules 4.5.7.8.10.11.12.13.15 and 18 of the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989; and the provisions of the Public Liability Insurance Act, 1991, whichever is applicable;
- That, he/they shall monitor his/their effluent(s) regularly and maintain its quality in 3 conformity with Board's standards and shall produce its proof, as and when asked for
- That, he/they shall submit application for consent again 30 days before the expiration of 4 the period of consent or within 30 days from the date of receipt of this order, whichever is applicable.
- That, they shall comply with the provisions (whichever applicable) of the Water 5 (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and Rules and Notifications issued there under. The quality of final effluent shall comply with the standards as prescribed under the Rules;
- 6 That, all waste water like effluent from DM plant, boiler blow down, oil extraction system. raw water treatment plant, blow down of cooling tower water used in fly ash slurry, leakage, floor washing etc should be treated properly and re-used as far as possible to maintain zero discharge. No discharge from ash ponds shall be maintained:
- 7 That, they shall update and well maintain up to the marks all effluent treatment plant of facilities/oil extraction units including LWTP:
- 8 That, they shall comply with the conditions (whichever applicable) of the environmental clearance issued by MoEFCC, Govt. of India vide dated 27.12.2010/14.01.2020 and submit the compliance report accordingly to the Board;
- 9 That, they shall comply with the standards as per notifications of MoEFCC, Govt. of India dated 02.01.2014, 07.12.2015, 07.03.2016, 28.06.2018, 19.10.2020 etc or as amended and as prescribe under the rules (whichever applicable) and point wise compliance report shall be submitted quarterly to the Board;
- 10 That, the unit shall make effort not to discharge any trade effluent outside the plant premises (in to the Ganga River) and maintain zero liquid discharge (ZLD):
- That, continuous online (24x7) monitoring system for effluent should be operative. 11 maintained and connected to CPCB & BSPCB server for data transfer.
- That, they shall re-use treated effluent to maintain Zero Discharge from the plant premises 12 ' and water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept;

- 13 That, they shall withdraw water from Sone River as per agreement with the competent authority and a report shall be submitted to the Board on quarterly basis;
- 14 That, daily water withdrawal, consumption, power generation and average PLF shall be submitted. The specific water consumption per MW hr shall be calculated based on water consumption and power generation and to be submitted in the compliance report.
- That, water meter conforming to ISO standards shall be installed at the inlet point of water uptake as well as at all necessary points to monitor the daily water consumption (including water consumption in fly ash slurry management) and a log book shall be maintained in this regard. Use of water efficient devices/fixtures and appliance should be promoted;
- That, they shall have to provide suitable and separate drainage system for sewer/other waste water and storm water. No sewage or untreated effluent would be discharged through storm water drains. A coloured drainage map shall be submitted to the Board within 3 months time;
- 17 That, they shall adopt rain water harvesting as provisions made by the local bye-law. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per CPCB guideline. Ensure proper management of storm water to optimum use and allow it to be by-passed during times of heavy rain to avoid any flooding problem inside the campus. Submit an action plan of well-designed rain water harvesting system with storm water management.
- 18 That, the sewage shall be treated in Sewage Treatment Plant (STP) and after treatment the water will be recycled for flushing of toilets, floor washing/cleaning, gardening/horticulture etc.

19 That, the quality of treated sewage of STP shall have to comply with the following standards (whichever applicable);

SI No.	Parameter	Limiting concentration in mg/l, except pH and Fecal Coliform
1	pH	5.5-9.0
2	BOD	10
3	Total Suspended Solids (TSS)	20
4	COD	.50
5	Nitrogen-Total	10
6	Phosphorus-Total for discharge into Ponds, Lakes	1.0
7	Fecal Coliform (FC) (Most Probable Number per 100 mililiter, MPN/100 ml	Desirable-100 Permissible-230

- 20 That, sludge generated from the STP will be dried and later it will be used as manure in agriculture and for green belt development/gardening/horticulture;
- 21 That, they shall comply with the provisions (whichever applicable) of the Solid Waste Management Rules, 2016. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with authorized recyclers. Organic waste compost/vermiculture pit with a minimum capacity of 0.3 kg/person per day must be installed;
- That, segregation of dry (in blue bin), wet (in green bin) and domestic hazardous waste (in black bin) must be ensure, wet waste must be composted inside the premises and dry & domestic hazardous waste shall be handed over to the local body;
- 23 That, non-biodegradable waste and dry waste like rejected corrugated cardboard, waste paper etc may be handed over to the recyclers registered with Bihar State Pollution Control Board:

- 24 That, they shall comply with the provisions (whichever applicable) of the E-Waste (Management) Rules, 2016. The e-wast Openerated shall be disposed off by handing over to the authorized collection centre and a record shall be maintained;
- 25 That, they shall comply with the provisions (whichever applicable) of the Plastic Waste Management Rules, 2016. They will make effort to discourage the use of plastics so that minimum generation of plastics wastes to be taken place;
- 26 That, the environmental statement for each financial year ending the 31st Sept., in Form-V as is amended to be submitted by the proponent to the Board as prescribed in the Environment (Protection) Rules, 1986;
- 27 That, they shall make provisions for display of data outside main factory gate about quantity and quality of water discharge and air emission along with solid waste generated within the factory premises;
- 28 That, compliance report of above consent conditions shall be submitted quarterly to the Board; and
- 29 That, notwithstand any thing stated above, the applicant unit shall abide by all the provisions of the environmental laws including policies and guidelines made there under;

To,
Sri Raj Kumar Pandey, CEO,
M/s Nabinagar Super Thermal Power Project, (3x660MW),
Vill-Majhiyawan, P.O.-Ankorha,

Distt.-Aurangabad

(S. Chandrasekar Member Secretar



Monitoring Report of M/s NTPC Nabinagar CTO Compliance Status as observed during the inspection on 28.10.2024

	EMISSION CONSENT ORDER	Comment	Present status
1	The unit shall complete the installation af one silo in all respects for ensuring collection of dry fly ash by 30 th June, 2021 to ensure its use by the concerned users and remaining within one year.	Two Silo completed	Remaining two will be completed by Dec. 2024.Present DFA utilsation is 38%.There is very less demand due to two thermal power plant
2	The unit shall install online stack emission monitoring system for stack-2 (unit-4) and ensure its connectivity with CPCB/SPCB after commercial operation of unit # 4.	complied	completed
3	The unit shall comply with new emission standard notified by MoEF& CC, dated- 07.12.2015 (PM: 30Mg/Nm3; SO2 : 100mg/Nm3; NOx: 100mg/Nm3 and Hg: 0.03mg/Nm3).	shall be complied as per timeline given by MoEF&CC	Contract awarded, work in progress
4	The unit shall develop dust suppression system and plantation on contingent ash dyke after covering and compacting with soil to avoid fugitive emission due to wind in the vicinity.	all ash of contingent ash dyke has been utilised	completed
5	The unit shall install flue gas desulphurization (FDG) System by December 31, 2022 to comply SO2 emission level.	Dec-26	Contract awarded, work in progress
6	The unit shall develop plantation in accordance with EC.	noted	1,43,900 has already been planted.
7	The unit shall comply all the conditions of EC & CTOs and submit the report of to the Board in addition with the concerned authority for EC (MoEF& CC) half yearly.	being complied	complied
8	The unit shall ensure utilization of fly ash as per the guidelines/notification issued by MoEF& CC Govt. of India.	noted	shall be complied
9	The unit shall submit Environmental Statement for the financial year ending the 31st March in Form V on or before 30th Sept every year	noted	complied

	DISCHARGE CONSENT ORDER	Comment	Present status
1	The unit shall complete the construction of planed ash dyke with HDPE/LDPE lining or any other suitable impermeable media by established technology within six months or submit exemption from MoEF&CC, Govt. of India.	Ash pond is constructed as per EC mandate envisaged by our Corporate Centre	Lagoon 1 construction is completed and Lagoon 2 is under progrss.Ash pond soil permeability is also very less.As it is not been mentioned in EC letter for exemption is submitted in MoEF&CC office New Delhi
2	The unit shall use liquid Waste Water Treatment Plant (LWWTP) for ensuring zero liquid discharge.	already complied	LWWTP is under service
3	The unit shall comply Specific Water Consumption (SWC) maximum of 3.0 m3/MWh in compliance of MoEF& CC Gol Nofificafion dated- 28.06.2018.	already complied	less than 3.0 m3/MWH
4	The unit shall comply all the conditions of EC & CTO's and submit the report of to the Board in addition with the concerned authority for EC (MoEF& CC) half yearly.	already complied	complied
5	The unit shall ensure utilization of fly ash as per the guidelines/notification issued by MoEF& CC Govf. of India.	noted	shall be complied
6	The unit shall submit Environmental Statement for the financial year ending the 31th March in Form-V on or before the 30th September every year.	noted	complied
7	The unit shall ensure the operation of STP within six months and treated water shall conform to the prescribed standards (pH: 6.5-9, BOD: 30mg/L, TSS: <100mg/L & FC <100MPN/100ML).	commissioned	completed
8	The Unit shall monitor Sone river quality in U/S and D/S with reference to intake point	complied	completed

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BY SPEED POST

No. J- 13012/ 16/2003.IA-II(T)

Government of India/ Bharat sarkar

Ministry of Environment & Forests

(Paryavaran Aur Van Mantralaya)

Paryavaran Bhawan. CGO Complex,Lodi road, New Delhi-110003 Dated: 3rd August,2004

To.

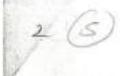
Shri M.H.Rao, DGM(Env.Engg.), National Thermal Power Corporation Ltd., Engineering Office Complex, Plot No. A-8A, Sector, Post No. 13, NOIDA-201 301, Uttar Pradesh.

Sub: 4x250 MW Nabinagar Captive Thermal Power Project near village Dhundwa, district Aurangabad, Bihar of M/s National Thermal Power Corporation Limited (NTPC). - Environmental clearance reg.

20/8/04 CC:

The undersigned is directed to refer to your communications no. CC:ESE:0270:2003;GEN:02T dated 22.10.03,23.1.04,24.03.04,21.04.04 & 24.05.04 on the above mentioned subject.

2. M/s NTPC proposed to set up a 4x250 MW coal based new power project under joint venture with Indian Railways near Village Dhundwa in Aurangabad, Bihar. This power project is a captive power plant and will provide power to Indian Railways. Total land required is 1700 acres. No forest land is involved. Kaimur Sanctuary is at 6 km away towards western side from the plant site. Coal requirement is 5 MTPA and will be supplied from North Karanpura of Central Coalfields Mine. Ash and sulphur will be 40-47% & 0.36 - 0.50% respectively. Calorific value will be 2900-3800 Kcal/kg. Ash generation will be 5500 TPD of both fly and bottom ash. Water requirement will be 4295 m3/hr and will be met from River Sone. 320 Families will get affected. 100 m wide greenbelt all around the main plant will be developed covering an area of 110 acres. Total cost of the



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project is Rs 4977.00 Crores environmental protection measures.

which includes Rs. 428.00 crores for

3. The environmental clearance for the above project is hereby accorded subject to implementation of following terms and conditions:

All the conditions stipulated by Bihar Pollution Control Board vide their letter no. T-2130 dated 8.4.04 should be strictly implemented.

ii) Land requirement should not exceed 1700 acres. Copy of the R&R plan and package of compensation for 320 families should be submitted to the Ministry before starting the work on the project.

(iii) Coal requirement is estimated at 5.00 MTPA having 40-47% ash content and 0.36-0.50% Sulphur content. Copy of confirmed coal linkage should be submitted to the Ministry within three months from the date of issue of this clearance letter.

iv) Two twin flue stacks of 220 m height each shall be provided with continuous online monitoring equipment. Exist velocity of 20-25 m/sec should be maintained.

v) High efficiency Electrostatic Precipitator(ESP) having efficiency of 99.9% should be installed to limit outlet SPM emission of 100 mg/Nm3.

Ash generation will be 5500 TPD of both fly and bottom ash.

Ash generated should be utilised as per provisions of the notification on Fly Ash Utilisation issued by the Ministry in September, 1999 and its amendments. By the end of 9th year full fly ash utilisation should be ensured.

wii). Water requirement should not exceed 4295 m3/hr. Waste water should be recycled and used in the plant. Copy of confirmed water withdrawal should be submitted to the Ministry within three months from the date of issue of this clearance letter.

viii). Care has to be taken that the runoff may so guided so that the local rain fed shallow reservoir, shallow rice terraces are not deprived of the surface runoff and a very careful Geo-hydrological mapping and designing has to be taken up to ensure that the local cultivation in the neighborhood of the power plant is not adversely affected due to altered hydrological regime. The Project authorities should get this done by a professionally competent authority before commencing construction work and submit a copy of the same to MoEF within three months from the date of issue of this letter.



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ix). The distance from the HFL to boundary of ash pond must be minimum 600 m and out of the 600 m, a 100 m wide green belt around the ash pond should be developed.

x). A systematic management of ash pond is required. The ash pond should be partitioned into compartments. The filling of the ash pond should first start from the site close to the river end. Plantation should be taken up along the set back area whenever dyke height is increased.

xi). Garland drain of sufficient capacity should be provided around ash pond to prevent any over flow of water to the river. Seepage water from the garland drain should be pumped back and recycled.

xii) Special arrangements should be made for the river bank protection to prevent bank crosion of the river all along the project area. Protection measures should be taken for a length of 2.5 Km upstream of the project. The length of the bank downstream which needs similar protection has not been determined. The Project authorities should undertake expeditiously all the bank protection measures and to maintain the protective structure in good condition throughout the life of the project.

xiii). The riverbank embankment should be taken early along with the site development.

- xiv). A systematic water harvesting plan, should be prepared for surface storage of water within the plant area so as to minimise the anticipated withdrawal of river water.
- xv). A ground water monitoring station be set up between the ash pond and the river front. Regular monitoring of water quality including heavy metals should be undertaken around ash dyke and the project area to ascertain the change in the water quality, if any, due to leaching of contaminants from ash disposal area.

xvi). While planning the layout of the plant, care should be taken that the neighboring villages are not subjected to undue noise, coal dust or any adverse environmental disturbances.

xvii). A proper planning and site evaluation should be based on satellite imageries rather than the old Survey of India Toposheets for a better idea of the current status.

xviii). Noise level should be limited to 75 Leq and regular maintenance of equipment be undertaken. For people working in the area of generator and other high noise area, earplug should be provided. 7 (3)

XXVI)

4.

 xix). A 100 m greenbelt should be developed all around the power plant covering an area of 110ha.

xx). Regular monitoring of the air quality should be carried out in and around the power plant and records be maintained. Periodic six monthly report should be submitted to this Ministry.

xxi). For controlling fugitive dust, regular sprinkling of water in vulnerable areas of the plant should be ensured.

 All other mitigative measures shall be taken as enumerated in Chapter 5 of the EIA report.

newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.usc.in.

xxiv). A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.

xxv). Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards should be submitted to this Ministry/ Regional Office/CPCB/SPCB.

Regional Office of the Ministry of Environment & Forests located at Bhubaneswar will monitor the implementation of the stipulated conditions. Complete set of Environmental Impact assessment Report and Management Plan should be forwarded to the Regional Office for their use during monitoring.

xxvii). Separate funds should be allocated for implementation of environmental protection measures alongwith item-wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.

XXVIII). Full cooperation should be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bhubaneswar/the CPCB/ the SPCB who would be monitoring the compliance of environmental status.





The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.

The environmental clearance accorded shall be valid for a period of 5 years for construction/operation of the power plant? In case, if the project authorities fails to do so within this stipulated period, this environmental clearance shall stand lapsed automatically.

In case of any deviation or alteration in the project proposed from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add

additional environmental protection measures required, if any.

The above stipulations would be enforced among others under the Water(Prevention and Control of Pollution) Act, 1974, the Air(Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments, the Environment Impact assessment Notification of January, 1994 and its amendments.



Copy to:

- 1. Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
- Secretary(Environment & Forests), Government of Bihar, Patna-800 023.
- 3. Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
- Bihar Pollution Control Board, Beltron House ,2nd floor, Chairman, Lal Bahadur Shastri Nagar, Patna-800 023 with respect to display a copy of the clearance letter at the Regional Office, District Indusries Centre and Collector's office for 30 days.

 Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.

6. Chief Conservator of Forests, Eastern Regional Office, Ministry of Environment & Forests, 194, Kharvela Nagar, Bhubaneswar-751001.

Director(EI),MOEF.

8. Guard file.

9. Monitoring file.

(A.DURAISAMY) DIRECTOR

Monitoring Report of BRBCL, Aurangabad

Compliance Status of Environmental Norms Stipulated in Environmental Clearance for Thermal Power Project (4x250MW) of BRBCL as observed during monitoring on 28.10.2024

S.No	STIPULATIONS	Compliance status
i	All the conditions stipulated by Bihar Pollution Control Board vide their letter no. T-2130 dated 08.04.2004 should be strictly implemented.	Being complied. All the conditions stipulated by BSPCB are being complied and report being submitted.
ii	Land requirement should not exceed 1700 Acres. Copy of R&R plan and package of compensation for 320 families should be submitted to the Ministry before starting the work on the project.	Complied Total land acquired by BRBCL is 1526 Acres. R&R policy has been submitted. Total amount paid against land compensation till date is Rs 324.46 Crores as stated.
iii	Coal requirement is estimated at 5.0 MTPA having 40-47% ash content and 0.36-0.50% Sulphur content. Copy of confirmed coal linkage should be submitted to the Ministry within three months from the date of issue of this clearance letter.	Complied. Copy of confirmed linkage letter has been submitted.

iv	Two twin flue stacks of 220m height each shall be provided with continuous online monitoring equipment. Exit velocity of 20-25m/sec should be maintained.	Complied. Two twin flue stacks of 220 m height are provided with continuous online monitoring equipment and connected to CPCB&BSPCB SERVER. Exit velocity is being maintained in range of 20-25 m/sec as stated.
v	High efficienccy Electrostatic Precipitator (ESP) having efficiency of 99.9% should be installed to limit outlet SPM emmission of 100mg/Nm3.	Being complied. All four units are having ESP with 99.999% efficiency as stated.

	Ash generation will be 5500 TPD of both fly and bottom ash.	Being complied.
	Ash generated should be utilised as per provisions of the	There is provision for Dry and wet disposal of Fly ash and wet
vi	notification on Fly Ash Utilisation issued by the Ministry in	disposal of Bottom ash.Provisions of the notification on Fly Ash
	September, 1999 and its amendments. By the end of 9th year	Utilisation are being complied. Ash utilization FY wise is:-
	full fly ash utilisation should be ensured.	1. 2021-22-9.12 LMT,
		2. 2022-23-13.63 LMT,
		3. 2023-24-14.32 LMT .
		Efforts are being made to achieve 100% as per new policy as
		stated.
vii	Water requirement should not exceed 4295 m3/hr. Waste water should be recycled and used in the plant. Copy of confirmed water withdrawal should be submitted to the Ministry within three months from the date of issue of this clearance letter.	Being complied. For FY 2023-24 average water requirement was approx, 2132.57 m3/hr. Water is being recycled to the maximum extent. Present specific water consumption is less than 3.0 M3/MWH. Water agreement has been signed with Bihar State Government Water Resource Department and submitted to this office.

Care has to be taken that the runoff may so guided so that the local rain fed shallow reservoir, shallow rice terraces are not deprived of the surface runoff and a very careful Geohydrological mapping and designing has to be taken up to ensure that the local cultivation in the neighbourhood of the power plant is not adversely affected due to altered hydological regime. The Project authorities should get this done by a professional competent authority before commencing construction work and submit a copy of the same to MoEF within three months from the date of issue of this letter.

Being complied.

Geohydrological mapping report has been submitted by IIT Roorkee dated. No adverse effect has been noted in surrounding villages as stated.

		Read s below:
ix	The distance from the HFL to the boundary of ash pond must be minimum 600m and out of 600m, a 100m wide green belt around the ash pond should be developed.	Requisite distance between HFL to boundary exists (more than 600 m) and provision has been kept for green belt of 100 m wide around ash pond. Presently ash pond construction is in progress. Green belt development has started and is being done phase wise.

should be partitioned into compartments. The filling of ash pond should first start from the site close to the river end. Platntation should be taken up along the set back area whenever dyke HDPE layer in Ash Pond. height is increased.

Read s below:

- A systematic management of ash pond is required. The ash pond 1. Ash pond is constructed as per design as stated. However during visit of MoEFCC officer dt:22.03.2018 and letter issued vide ref no 105-23/04/EPE/2274 dt:30.05.18 a new condition was laid for lying
 - 2.Lagoon 1 construction is completed and Lagoon 2 is under construction. Ash pond soil permeability is also very less. As it has not been mentioned in EC a letter has been submitted in MoEFCC for exemption from new condition as stated.

Garland drain of sufficient capacity should be provided around ash pond to prevent any overflow of water to the river. Seepage water from the garland drain should be pumped back and recycled.

Read s below:

Provision exist for the same in ash dyke being constructed.

The ash dyke will be constructed phase wise.

Special arrangements should be made for the river bank protection to prevent bank erosion of the river all along the project area. Protection measures should be taken for a length of 2.5 Km upstream of the project. The length of the bank downstream which needs similar protection has not been determined. The Project authorites should undertake expeditiously all the bank protection measures and to maintain the protective structure in good condition throughout the life of the project.

Read as below:

Complete land for makeup water system has been acquired. River bank protection will be done along with permanenet make up water corridor completion as stated. CWPRS has carried study, Final report has been submitted .Scheme finalization is under progress. Engineering process is under progress due to change in location. Two studies are under progress-reports have been received as stated.

		Mentioned in above point
xii i	The river bank embankment should be taken early along with the site development.	
xiv	A systematic water harvesting plan should be prepared for surface storage of water within the plant area so as to minimise the anticipated withdrawal of river water.	Complied. Provision exists for the same with LETP, CSSP and AWRS to minimise withdrawl of water from river. As water table is very high in this area as stated in the report. A study for effective rainwater utilisation has been conducted and report has been submitted by the consultant in this regard.
xv	A ground water monitoring station to be set up between the ash pond and the river front. Regular monitoring of water quality including heavy metals should be undertaken around ash dyke and the project area to ascertain the change in the water quality, if any, due to leaching of contaminants from the ash disposal area.	Complied. Provision has been made for ground water quality measurement around ash dyke in the form of hand pump/well exists. The same is being utilised for regular monitoring (by MoEF/CPCB approved agencies) of the ground water quality as stipulated and values are within limits.

	While planning the layout of the plant, care should be	Complied.
xvi	taken that the neighbouring villages are not subjected	
	to undue noise, coal dust or any adverse environmental	Taken care during plant design stage. Plant design meets various
	disturbances.	enviromental norms as stated.
xvii	A proper planning and site evaluation should be based on	Complied.
	satellite imageries rather than the old Survey of India	Satellite imageries have been used.
	Toposheets for a better idea of the current status.	
	Noise level should be limited to 75 Leq and regular	Complied.
xviii	maintenance of equipment be undertaken. For people	
		Noise values are within limits.
	earplug should be provided.	

xix	A 100 m green belt should be developed all around the power plant covering an area of 110 acres/ha.	Provision has been kept around plant area for development of green belt. Green belt development has been started and is being done progressively. As stated, plantation has been done in 143 acres.
xx	Regular monitoring of the air quality should be carried out in and around the power plant and records be maintained. Periodic six monthly report should be submitted to Ministry.	Being Complied. Air quality is being monitored with 4 online AAQMS stations. Besides manual monitoring is being done. Values are within limits.
xxi	For controlling fugitive dust, regular sprinkling of water in vulnerable areas of the plant should be ensured.	Being Complied. Regular water sprinkling is being done to control fugitive dust in the plant.
xxii	All other mitigate measures shall be taken as enumerated in Chapter 5 of the EIA report.	Complied. Mitigating measures for construction phase have been implemented and measures for operational phase are part of design as stated which includes recycling water, plantation etc.

	The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearnace letter are available with the state Pollution Control Board/ Committee and may also be seen at the website of the Ministry of Environment and Forest at http://envfor.nic.in.	Complied as stated in the report
xxiv	A separate environmental monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguard.	Being Complied. Environmental monitoring cell has been established.
xxv	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguard should be submitted to this Ministry/ Regional Office /CPCB/SPCB.	Being complied. Half yearly report on the status of implementation of the stipulated conditions and environmental safeguard have been submitted to BSPCB, Patna and regional office, M o E F & C C, Ranchi.
xxvi	Regional office of the Ministry of Environmental & Forest located at Bhubaneswar will monitor the implementation of the stipulated conditions. Complete set of Environmental Impact Assessment Report and management plan should be forwarded to the Regional Office for their use during monitoring.	Being Complied. Above project was monitored by Sh. Sandeep Nandi Scientist B on 28.10.2024

	Separate fund should be allocated for implementation of environmental protection measures along with item wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environmental protection measures should not be diverted for other purposes and year wise expenditure should be reported to the Ministry.	Being Complied. As per Feasibility report 344.45 Cr marked for various environmental protection measures. Total estimated expenditure is approximately more than 1500 crores. Funds earmarked for the environmental protection measures are not being diverted for other purposes and year wise expenditure is being submitted.
xxviii	Full cooperation should be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bhubaneswar/ the CPCB/ the SPCB who would be monitoring the compliance of environmental status.	Being Complied.

As per monitoring done on 28.10.2024 by the undersigned, and review of monitored data reports submitted along with the half yearly EC compliance report for period 01.04.2024 to 30.09.2024, the following partially complied condition has been detected, and this have been highlighted in bold in above report, and is listed as follows:-

1. Provision has been kept around plant area for development of green belt. Green belt development has been started and is being done progressively.

ANNEXURE - 10



बिहार राज्य प्रदूषण नियंत्रण पर्वत् Blhar State Pollution Control Board

under sections 25 & 26 of the Water (Prevention & Control of Pollution)Act, 1974 & under section 21 of the Air (Prevention & Control of Pollution)Act, 1981.

Reference application no 509:2 dated 10,10.03 of Mr. Vijay Krishna Das, DGM -112, NTPC, Bastorn Region, Head Charlet, Loknayak Jai Prakash Bhawan, Dakbunglow Read, Patna -1 (on behalf of proposited Rall Bijlee Company, a joint venture Company to to formed by NTPC and Ministry of Railways) for establishment/ construction of coal

- After considering:
 - The fact stated in their application, Feasibility Report and (i) (ii)
 - Bihar State Pollution Control Board's notification no. 26,
 - Provisions of the Water & the Air Acts. (111) Related Public hearing dated 5.4.04 (lv)
- NOC in favour of the site and the project stated above is hereby accorded 3 subject to the following conditions.
 - The unit shall obtain consent to operate under sections 25-8. (I)26 of the Water, Act, 1974 and section 21 of the Air Act, 1981, prior to commissioning of the plant from Pollution Control Board.
 - The effluent (Domestic & Trade) and emission, if any shall (ii) conform to the standard prescribed by the Board.
 - The height of exhaust pipe of the D.G. set shall be as (lii) prescribed by the C.P.C. Board and the noise level shall be within the prescribed limit.
 - Minimum bright of the proposed stack shall be 220 meter (IV) with porthole and platform in each stream as per norms of the C.P.C. (0.)
 - Appropriate capacity of E.S.P. shall be provided to achieve (v) standard prescribed by the Board i.e. 100 mg/Nm3
 - Appropriate measures shall be taken to control fugitive dust (vI) emission within the plant including ash pond areas.

Bellron Bhawan, 2nd Fibor, Lai Bahadur Shasiri Nager, Pains - 800 023, SPADX-2281250, 2202265 6 Fris | de12-228 1050 Member-Secretary : 2261250, Telefat-2291700

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- Compliance report of above conditions shall be submitted to (ziz)
- ree plantation shall be done in 100 in width all around the Loundry and ash pond area. (xx)
- Any oldier condition as prescribed from time to time by Board. (xxi)
- Billiar State Pollution Control Board reserves the option to revise and add other conditions, if necessary, for protection of environment in general and for pollution control in particular
- The present NOC should not be construed as an assurance (xxii) lot granting consent to operate the proposed plant and is subject to compliance of all the conditions noted above.
- (xxiii) This NOC is valid for a period of 36 months from date of

(I.S. SINGH) Member-Secretary

Memo No. T-2130

Date 8-4-04

Copy forwarded to Mr. V.K. Das, DGM-NP M/s National Thermal Power Corporation, Eastern Region, 14 and Quarter, Loknayak Jai Prakash Bhawan, Dakbunglow Road, Palna-1 / Cortinussioner-cum-Secretary Environment and Forest, Govt. of Bihar /Regional Officer/Patinh/ Sri J.K.P. Singh, incharge, computer section for information and necessary action.

> (I.S. SINGH) Member-Secretary

Heed Office

Beltron Bhawen, 2nd Floor, Lat Bahadur Shastri Nagar, Patha - 800 023, EPADX-2201260, 3202205 or Chairman : 238 1770, 74+ | 0012/2781050 Mamber Bactelery : 2201260, Talafax-2201200 E-mail - bapic O fish (10.44): Waltella - sews.biharapob.com

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COTPAN - 0012-224-781

Parivesh Bhawan, NOTE, Patliputra Industrial Area

Patliputra, Patna - 800 010

Patna, dated- 17-6-2-21

EMISSION CONSENT ORDER

With reference to the application ID- 4246584, dated 13.01.2021 of M/s BRBCL (4*250 MW) Nabinagar, H Type Office, Nabinagar, Dist.- Aurangabad- 824301 for consent under sections 21 of the Air (Prevention & Control of Pollution) Act, 1981, they are granted consent to operate their plant of BRBCL, Nabinagar, Dist.- Aurangabad- 824301 unit # 1, 2, 3, 4 capacity 4*250 MW for the period upto 12.01.2026 with the following conditions:-

- That, he/they shall not make any alteration, addition, deletion or modification in the plant without the prior clearance from the Board and shall also abide by the obligations under sections 22,23 and 31A of the Air (Prevention & Control of Pollution) Act, 1981 and further shall extend co-operation to the Board in performing its functions entrusted under sections 24,25 and 26 of the Act ;
- That, he/they shall comply with the requirements of rule 14 of the Environment(Protection) Rules. 2 1986, rules 4,5,7,9,10 and 11 of the Hazardous & Other Wastes (Management and Transboundary Movement). Rules,2016 ; rules 4,5,7,8,10,11,12,13,15,17 and 18 of the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989; and the provisions of the Public Liability Insurance Act, 1991, whichever is applicable;
- That, he/they shall monitor his/their emission(s) and the ambient air quality from representative 3. point regularly and shall maintain its quality in conformity with Board's standards and shall produce its proof, as and when asked for,
- That, he/they shall submit application for consent again 30 days before the expiration of the period 4 of consent i.e. 11.01.2026 or within 30 days from the date of receipt of this order, whichever is applicable.
- The unit shall complete the installation of one silo in all respects for ensuring collection of 5. dry fly ash by 30th June, 2021 to ensure its use by the concerned users and remaining within one year.
- The unit shall install online stack emission monitoring system for stack-2 (unit-4) and 6. ensure its connectivity with CPCB/SPCB after commercial operation of unit #4.
- The unit shall comply with new emission standard notified by MoEF&CC, dated- 07.12.2015 7. (PM: 30Mg/Nm3; SO₂: 100mg/Nm3; NOx: 100mg/Nm3 and Hg: 0.03mg/Nm3).
- The unit shall develop dust suppression system and plantation on contingent ash dyke after 8. covering and compacting with soil to avoid fugitive emission due to wind in the vicinity.
- The unit shall install flue gas desulphurization (FDG) System by December 31, 2022 to 9 comply SO₂ emission level.
- The unit shall develop plantation in accordance with EC. 10.
- The unit shall comply all the conditions of EC & CTOs and submit the report of to the Board 11. in addition with the concerned authority for EC (MoEF&CC) half yearly.
- The unit shall ensure utilization of fly ash as per the guidelines/notification issued by 12 MoEF&CC Govt. of India.
- The unit shall submit Environmental Statement for the financial year ending the 31st March 13 in Form-V on or before the 30th September every year.

Sri C Sivakumar M/s BRBCL (4*250 MW) Nabinagar H Type Office, Nabinagar Dist. - Aurangabad- 824301

To.

S.Chandrasekar) Member Secretary

BIHAR STATE POLLUTION CONTROL BOARD

Ref no. 784

Email:

Parivesh Bhawan, NSB-2. Patliputra Industrial Area Patliputra, Patna - 800 010

Patna dated- \7 - 6 - 2 c 2 |

DISCHARGE CONSENT ORDER

With reference to the application ID- 4246584, dated 13.01.2021 of M/s BRBCL (4*250 MW) Nabinagar, H Type Office, Nabinagar, Dist.- Aurangabad- 824301 for consent under sections 25/26 of the Water (Prevention & Control of Pollution) Act 1974, they are granted consent to bring into use their new outlet(s) for discharge of trade effluent and/or domestic sewage operate his/her plant of BRBCL, Nabinagar, Dist.-Aurangabad- 824301 unit # 1, 2, 3, 4 capacity 4*250 MW for the period upto 12.01.2026 with the topolying conditions -

- That, he'they shall not make any alteration, addition deletion or modification in the plant without the prior clearance from the Board and shall also abide by the obligations under sections 24.31 and 33A of the Water (Prevention & Control of Pollution.) Act, 1974 and further shall extend cooperation to the Board in performing its functions entrusted under sections 20.21.23.30 and 32 of the Act.
- That, he/they shall comply with the provisions of the rule 14 of the Environment (Protection) Rules. 1986. previsions of the Hazardous & Other Wastes (Management & Tran-boundary Movement) rules. 2016. rules 4,5,7,8,10,11,12,13, 15,17 and 18 of the Manufacture. Storage and Import of Hazardous Chemical Rules 1989, and the provisions of the Public Liability Insurance Act 1991 whichever is applicable.
- 3 That heithey shall monitor his/their effluentist regularly and maintain its quality in conformity with Board's standards and shall produce its proof as and when asked for
- 4 That heithey shall submit application for consent again 30 days before the expiration of the period of consent i.e. 11.01.2026 or within 30 days from the date of receipt of this order, whichever is applicable.
- The unit shall complete the construction of planed ash dyke with HDPE/LDPE lining or any other suitable impermeable media by established technology within six months or submit exemption from MoEF&CC, Govt. of India.
- The unit shall use liquid Waste Water Treatment Plant (LWWTP) for ensuring zero liquid discharge.
- The unit shall comply Specific Water Consumption (SWC) maximum of 3.0 m3/MWh in compliance of MoEF&CC Gol Notification dated- 28.06.2018.
- 3 The unit shall comply all the conditions of EC & CTOs and submit the report of to the Board in addition with the concerned authority for EC (MoEF&CC) half yearly.
- The unit shall ensure utilization of fly ash as per the guidelines/notification issued by MoEF&CC Govt. of India.
- 10 The unit shall submit Environmental Statement for the financial year ending the 31st March in Form-V on or before the 30st September every year.
- The unit shall ensure the operation of STP within six months and treated water shall conform to the prescribed standards (pH: 6.5-9, BOD: 30mg/L, TSS: <100mg/L & FC <100MPN/100ml).
- The unit shall monitor Sone river water Quality in U/S & D/S with reference to water intake point.

Sri C Sivakumar M/s BRBCL (4*250 MW) Nabinagar H Type Office, Nabinagar Dist - Aurangabad- 824301

S Chandrasekari Member Secretary

Monitoring Report of M/s BRBCL Nabinagar CTO Compliance Status as observed during the inspection on 28.10.2024

	EMISSION CONSENT ORDER	Comment	Present status
1	The unit shall complete the installation af one silo in all respects for ensuring collection of dry fly ash by 30 th June, 2021 to ensure its use by the concerned users and remaining within one year.		Remaining two will be completed by Dec. 2024.Present DFA utilsation is 38%.There is very less demand due to two thermal power plant
2	The unit shall install online stack emission monitoring system for stack-2 (unit-4) and ensure its connectivity with CPCB/SPCB after commercial operation of unit # 4.	complied	completed
3	The unit shall comply with new emission standard notified by MoEF& CC, dated- 07.12.2015 (PM: 30Mg/Nm3; SO2 : 100mg/Nm3; NOx: 100mg/Nm3 and Hg: 0.03mg/Nm3).	shall be complied as per timeline given by MoEF&CC	Contract awarded, work in progress
4	The unit shall develop dust suppression system and plantation on contingent ash dyke after covering and compacting with soil to avoid fugitive emission due to wind in the vicinity.	all ash of contingent ash dyke has been utilised	completed
5	The unit shall install flue gas desulphurization (FDG) System by December 31, 2022 to comply SO2 emission level.	Dec-26	Contract awarded, work in progress
6	The unit shall develop plantation in accordance with EC.	noted	1,43,900 has already been planted.
7	The unit shall comply all the conditions of EC & CTOs and submit the report of to the Board in addition with the concerned authority for EC (MoEF& CC) half yearly.	being complied	complied
8	The unit shall ensure utilization of fly ash as per the guidelines/notification issued by MoEF& CC Govt. of India.	noted	shall be complied
9	The unit shall submit Environmental Statement for the financial year ending the 31st March in Form V on or before 30th Sept every year	noted	complied

	DISCHARGE CONSENT ORDER	Comment	Present status
1	The unit shall complete the construction of planed ash dyke with HDPE/LDPE lining or any other suitable impermeable media by established technology within six months or submit exemption from MoEF&CC, Govt. of India.	Ash pond is constructed as per EC mandate envisaged by our Corporate Centre	Lagoon 1 construction is completed and Lagoon 2 is under progrss. Ash pond soil permeability is also very less. As it is not been mentioned in EC letter for exemption is submitted in MoEF&CC office New Delhi
2	The unit shall use liquid Waste Water Treatment Plant (LWWTP) for ensuring zero liquid discharge.	already complied	LWWTP is under service
3	The unit shall comply Specific Water Consumption (SWC) maximum of 3.0 m3/MWh in compliance of MoEF& CC Gol Nofification dated- 28.06.2018.	already complied	less than 3.0 m3/MWH
4	The unit shall comply all the conditions of EC & CTO's and submit the report of to the Board in addition with the concerned authority for EC (MoEF& CC) half yearly.	already complied	complied
5	The unit shall ensure utilization of fly ash as per the guidelines/notification issued by MoEF& CC Govf. of India.	noted	shall be complied
6	The unit shall submit Environmental Statement for the financial year ending the 31th March in Form-V on or before the 30th September every year.	noted	complied
7	The unit shall ensure the operation of STP within six months and treated water shall conform to the prescribed standards (pH: 6.5-9, BOD: 30mg/L, TSS: <100mg/L & FC <100MPN/100ML).	commissioned	completed
8	The Unit shall monitor Sone river quality in U/S and D/S with reference to intake point	complied	completed





National Accreditation Board for Testing and Calibration Laboratories

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DIGWADIH CAMPUS, P.O FRI, DIJANBAD, JHARKHAND, INDIA

in the field of

TESTING

Certificate Number:

TC-10435

Issue Date:

22/03/2022

Valld Until:

21/03/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity: CSIR- Central Institute of Mining and Fuel Research

Signed for and on behalf of NABL



herletton

N. Venkateswaran Chief Executive Officer



RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI-834010 CSIR- CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH सीएसआईआर-केंद्रीय खनन एवं ईंघन अनुसंघान संस्थान अनुसंधान केंद्र, रांची ,पोस्ट नामकुम, रांधी -834010



TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 19.06.2023 TO 01.07.2023

LOADING END ANALYSIS REPORT

Power Utility-NTPC-NPGA

Test Report No. CIMER/RINC/TPS/BACH/NPGA/ JUNE JULY/2025/16

Date:04-08-2023

Name of Coal Company. Central Coal Field Ust. Loading Area/Skiing-Sachra (Piperwar Area)		Date of start of analysis -28.0 Product tested - Coel Sample	Date of start of analysis -28.07.2023 Product tested - Coal Sample					Relative H Temperatu	8 5	idity of labor of laborator	Relative Humidity of laboratory: Temperature of laboratory:	of laboratory:	of laboratory: 50%
			Date of	R	Reilway Rake/MGR *	(a)	GR*		A	A	Air-dried basis	Air-dried basis	A
Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.		R.R. Date	R.R. Date M.N.		×	M % ASH %	M % ASH % (kcal/kg)	M % ASH % (kcal/kg) M%
CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0219/WC	19-06-2023	21-06-2023	26-06-2023	3945,00	161003714	-	19-06-2023	19-06-2023 11.1	92	11.1	11.1 24.8	11.1 24.8 4761.24	11.1 24.8 4761.24 8.4
CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0221/WC	20-06-2023	21-06-2023	26-06-2023	3865.14	161003715	000	20-06-2023	20-06-2023 10.8	1	10.8	10.8 22.1	10.8 22.1 5040.79	10.8 22.1 5040.79 8.0
CCL/B.ACH/NTPC-JV/NABINAGAR/NPGA/0240/WC	26-06-2023	03-07-2023	05-07-2023	3784.68	161003732	2.15	26-06-2023	26-06-2023 8.0		8.0	8.0 35.0	8.0 35.0 4151.00	8.0 35.0 4151.00 6.9
CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0241/WC	26-06-2023	03-07-2023	05-07-2023	3894.73	161003733		26-06-2023	26-06-2023 8-5		8.5	8.5 29.9	8.5 29.9 4561.25	8.5 29.9 4561.25 7.1 30.4
CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0247/WC	28-06-2023	03-07-2023	05-07-2023	3887.63	161003736		28-06-2023	28-06-2023 8.5	20	8.5	8.5 31.2	8.5 31.2 4450.86	8.5 31.2 4450.86 6.9 31.7
CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0249/WC	28-06-2023	03-07-2023	05-07-2023	3772.32	161003737	92	29-06-2023	29-06-2023 8.6	38	8.6	8.6 30.4	8.6 30.4 4413.03	8.6 30.4 4413.03 6.6 31.1
CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0251/WC	29-06-2023	04-07-2023	05-07-2023	3758.04	161003739		29-06-2023	29-06-2023 8.0		8.0	8.0 33.9	8.0 33.9 4288.53	8.0 33.9 4288.53 6.3
CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0252/WC	29-06-2023	04-07-2023	05-07-2023	3692.93	161003740	-	30-06-2023	30-06-2023 8.1	30	00	8.1 33.6	8.1 33.6 4291.74 6.5	8.1 33.6 4291.74 6.5 34.2
CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0257/WC	01-07-2023	04-07-2023	05-07-2023	3729.52	161003742		01-07-2023	01-07-2023 7.2	5 J	7.2	7.2 39.4	7.2 39.4 3899.27	7.2 39.4 3899.27 5.4
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^{*} Customer Provided Information

CSIR-CIMER, RC, RANOH (Authorized Signatory) (Dr. M.K.Saini)

^{**}Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

Sample collected as per FSA.

⁽IIQSulphur(s) within his been put in the bomb caler meter as determined in the laboratory following (ASTM D 4239-18). (II) Testing Muthod followed - Ash & Molsture as per ASTM 0-7582-15 & GCV as per ASTM 0-5865-15, EM as per IS 1350 (Part-1): 1984 Beaffirmed 2013

⁽iv) None of the experiment is performed by external service provider.

⁽v) This report should not be replicated or reproduced.

⁽w) The result related to the sample tested. Beserve part of the sample will be destroyed after three months.



सीएसआईआर-केट्रीय खनन एवं ईंघन अनुसंधान संस्थान अनुसंधान केंद्र, रांची ,पोस्ट-नामकुम, रांधी -834010 CSIR- CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI-834010



Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 19.06.2023 TO 01.07.2023

LOADING END ANALYSIS REPORT FOR TOTAL MOISTURE

Date:04-08-2023

Test Report No.-CIMFR/RNC/TPS/BACH/NPGA/ JUNE-JULY/2023/16
Name of Coal Company- Central Coal Field Ltd.
Loading Area/Siding-Bachra (Piperwar Area)

Power Utility-NTPC-NPGA
Date of start of analysis -28.07.2023
Product tested - Coal Sample

Sample ID Date of collection		e ID Date of collection	Date of Date of Sample R.R.	Date of Date of Sample R.R.	Date of Date of Sample R.R. Collection preparation receiving at R.R. R.R.No./F.
Date of collection	- 3	Date of preparation	Date of Sample R.R. preparation receiving at Quantity (Mt)	Date of Sample R.R. preparation receiving at Quantity (Mt)	Date of Sample R.R. preparation receiving at Quantity (Mt)
	Date of preparation 21-06-2023		Date of sample R.R. quantity (Mt)	Date of sample R.R. quantity (Mt)	Date of sample R.R. R.R.No./ F. Quantity Note No. 26-06-2023 3945.00 161003714 1

* Customer Provided Information

Note

(i) Sample collected as per FSA.

(ii) Testing Method followed - Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2013

(iii) None of the experiment is performed by external service provider.

(iv) This report should not be replicated or reproduced.

(v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months

Dr. M.K.Saini I

[Dr. M.K.Saini] (Authorized Signatory) CSIR-CIMFR, RC, RANCHI

END OF TEST REPORT

Instrument MAC: 00:60:0C:85:11:A1 Sample ID: T-11376-Date: Fri Jul 28 14:11:06 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: Initial Temp: 29.9501 EE Value: 946.993 Jacket Temp: 30.0955 Temp. Rise: 5.9229 Weight: 0.4938 Spike Weight: 0.5053 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.6400

1

Gross Heat: 4761.24 Units: cal/g

28/7/23

Consists

CCL BACHINTPC-JUINABINAMARINPORA10219/WC

F-10817)

Units Multiplier:

Sample ID: Method: Mode: Initial Temp: Jacket Temp: Weight: Fuse: Sulfur:	T-11378 Dynamic Determination 30.1373 30.1823 0.9950 50.0000 0.6700	Instrument MAC: Date: Type: Bomb ID: EE Value: Temp. Rise: Spike Weight: Acid:	00:60:0C:85:11:A1 Wed Jul 26 15:22:34 2023 Final 1 948.985 5.3622 0.0000 8.0000
Units Multiplier:	1	Gross Heat: Units:	5040.79

2000 by

cal/g

CHAN 0

CCL BACH INTPE- JV / NABINA WAR (NPGA / 0221) WC

100 100 1m

1, 12-7	5		Instru	ment MAC:	00:60	1:0G:85:14:4E
Sample ID:		T-12	256 Date:		Mon Jul 31 1	3:40:22 2023
Method:		Dyna	mic - Type:			Final
Mode:	3.	Determina	tion Bemb	ID:	- 10 DBM*	1
Initial Temp:		29.8	418 EE Val	lue:	40	938.620
Jacket Temp:	144	30.0	162 Temp.	Rise:	20,70	4.4759
-Weight:	9 - 3	, 0.9	953 Spike	Weight:	A 15 52	0.0000
Fuse:	115	50.0	000 Acid:	The state of the s	æ .A.	8.0000
Sulfur:		0.5	200	MESSIO		
ENDING THE PROPERTY OF THE PERSON OF THE PER			CO. T. 1140. 40. 3			

OCL/BACH / NTPC-JV /NABINAMAR/NPURA

Instrument MAC: Date: Mon-Jul 31 13:49:34 2023 : Sample ID: T-12257 Method: Type: • Dynamic Final Mode: Bomb ID: Determination Initial Temp: 29.7700 EE Value: 938.620 Temp. Rise: 4.9265 Jacket Temp: 30.0071 0.9984 Spike Weight: 0.0000 Weight: Fuse: 50.0000 Acid: 8.0000 0.5400 Sulfur;

Gross Heat: 4561.25 Units: cal/g

311+123

CCL/BACH/NTPC-JV/NABINAVIAR/NPVIA/OUL/WC

photoslas

Units Multiplier:

the state of the state of		instrument mac.	00,00.00.00.11.94
Sample ID:	T-12263	Date!	4on Jul 31 13:49:23 2023
Method:	Dynamic	. Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	30.1073	EE Value:	935.072
Jacket Temp:	30.0518:	Temp. Rise:	4.8290
Weight:	0.9989	Spike Weight:	0.0000
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.5100	4	
Units Multiplier:	Î	Gross Heat:	4450.86
	- 10	Units:	cal/g
			The state of the s

Fradhulika 311+123

CCL/BACH/NTPC-JV) NABINAWAY NPWA/0247/wcollism

Instrument MAC: 00:60:0C:85:11:94 Mon Jul 31 14:07:59 2023 Sample ID: Date: Type: Dynamic Final Method: Mode: Determination Bomb ID: 1. 30.0303 EE Value: 935.072 Initial Temp: Temp. Rise: 4,7701 Jacket Temp: 30.0301 Spike Weight: 0.0000 Weight: 0.9949 50.0000 Acid: + 8.0000 Fusé: 0.5300 Sulfur: Units Maltiplier 4413.03 Gross Heat: Units: cal/g

Madhally9

CCL / BACH / NTPC- JV /NABINAUAR/NPUTA / 0249/WCOTTSIN

Instrument MAC: 00:60:0C:85:11:94 Sample ID: T-12267 Date: Mon Jul 31 12:25:31 2023 Method: Type: Dynamic Final Mode: Determination Bomb ID: 1 Initial Temp: 29.9617 EE Value: 935.072 Jacket Temp: Temp. Rise: 30.0521 4.6351 Weight: 0.9943 Spike Weight: 0.0000 Fuse: Acid: 50.0000 8.0000 Sulfur: 0.5400 Units Multiplier: **Gross Heat:** 1 4288.53

Units: cal/g

CCL/BACH/NTPC-JV/NABINAWAR/NPUTA/025//WC

98 instrument MAC: 00:60:0C:85:11:94 Sample ID: T-12268 Date: Mon Jul 31 12:34:09 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: Initial Temp: 30.0105 EE Value: 935.072 Jacket Temp: 30.0694 Temp. Rise: 4.6238 Weight: 0.9909 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5800 Units Multiplier: **Gross Heat:** 1 4291.74

Units:

cal/g

CCL / BACH / NTPC-JV/NABINAGAR/NPGA/0252/WC

		99	
		Instrument MAC:	00:60:0C:85:11:A1
Sample ID:	T-12273	Date:	Mon Jul 31 12:18:40 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.4729	EE Value:	946.993
Jacket Temp:	30.0329	Temp. Rise:	4.1704
Weight:	0.9952	Spike Weight:	0.0000
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.4800	9.000000000	8.0000
Units Multiplier:	1	Gross Heat:	3899.27

Units:

3899.27

cal/g

CCL/BACH/NTPC-OV/NABINAWARP) NPWA 102571 WC



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 27.06,2023 TO 17.07.2023

LOADING END ANALYSIS REPORT

Date of start of asalysis -04,08 2023 Primer CHIRTY-STEE-SPOAL

Date:17-08-2023

Test Report No. -CINTRUTING/TIS/SACH/NIPGA/ JUNE JULY/2023/19

No.	Name of Coal Company - Control Coal Field IIII. Loading Acos/Siding-Bactica (Riperwal Asset)		Product rested - Coal Sample	Balls of start of analysis on 08 2023 Product respect - Cost Sample	-					Helabise H Temperat	Relative Humbling of Table Temperature of Indonesia	Helative Hunddiny of Suboratory. Temperature of laboratory:	Temperature of laboratory.	Temperature of laboratory 250.7°C
No.			The same of the sa	Date of	77	Railway Rake/MGR *	3	MGR *	200	200	MGR * Air-dried basis	Air-dried basis	Air-dried basis	200
	Sample ID	Date of collection	Date of preparation	receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.		R.R. Date	-08	R.R. Date	R.B. Date M %	R.R. Date M.S. ASHS	R.R. Date M % ASH % (kcal/kg)	R.R. Date M.S. ASH S. (kcat//kg) MS.
	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0244/WC	27-06-2023	03-07-2023	05-07-2023	3893.55	161003734	ä	34 27-06-2023		27-06-2023	27-06-2023 8.2	27-06-2023 8.2 32.2	27-06-2023 8.2 32.2 4357.41	27-06-2023 8.2 32.2 4357.41 7.0
	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0289/WC	12-07-2023	17-07-2023	19-07-2023	3735.77	161003768	88	768 12-07-2023	2016	12-07-2023	12-07-2023 9.8	12-07-2023 9.8 20.4	12-07-2023 9.8 20.4 5225.82	12-07-2023 9.8 20.4 5225.82 8.5
	CCL/BACH/NTPC-IV/NABINAGAR/NPGA/0290/WC	12-07-2023	17-07-2023	19-07-2023	3701.68	161003769	-69	769 12-07-2023	200	12-07-2023	12-07-2023 9.5	12-07-2023 9.5 20.5	12-07-2023 9.5 20.5 5247.45	12-07-2023 9.5 20.5 5247.45 8.2
4	CCI/BACH/NTPC-IV/NABINAGAR/NPGA/0291/WC	13-07-2023	17-07-2023	19-07-2023	3663.76	161003770	70	70 13-07-2023	9	13-07-2023	13-07-2023 9.7	13-07-2023 9.7 20.5	13-07-2023 9.7 20.5	13-07-2023 9.7 20.5 5238.60 8.6
5	CCL/BACH/NTPCJV/NABINAGAR/NPGA/0293/WC	13-07-2023	17-07-2023	19-07-2023	3819,42	161003772	27	72 13-07-2023		13-07-2023	13-07-2023 9.6	13-07-2023 9.6 20.6	13-07-2023 9.6 20.6 5206.33	13-07-2023 9.6 20.6 5206.33 8.3
6	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0296/WC	14-07-2023	17-07-2023	19-07-2023	3889.42	161003775	75	75 14-07-2023	9.1	14-07-2023	14-07-2023 9.5	14-07-2023 9.5 22.7	14-07-2023 9.5 22.7 5060.38	14-07-2023 9.5 22.7 5060.38 7.9
7	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0300/WC	16-07-2023	17-07-2023	19-07-2023	3768.03	161003778	78	78 16-07-2023		16-07-2023	16-07-2023 9.9	16-07-2023 9.9 19.8	16-07-2023 9.9 19.8 5289.52	16-07-2023 9.9 19.8 5289.52 8.9
00	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0302/WC	16-07-2023	17-07-2023	19-07-2023	3666,14	161003779	79	79 16-07-2023	**	16-07-2023	16-07-2023 9.1	16-07-2023 9.1 22.6	16-07-2023 9.1 22.6 5149.68	16-07-2023 9.1 22.6 5149.68 8.0
9	CCL/BACH/NTPC-IV/NABINAGAR/NPGA/0303/WC	16-07-2023	17-07-2023	19-07-2023	3704.58	161003781	-	1 16-07-2023		16-07-2023	16-07-2023 10.0	16-07-2023 10.0 19.6	16-07-2029 10.0 19.6 5260.59	16-07-2029 10.0 19.6 5260.59 8.7
0	COL/BACH/NTPC-JV/NABINAGAR/NPGA/0304/WC	17-07-2023	17-07-2023	19-07-2023	3617.05	161003782	M	2 17-07-2023	23	17-07-2023	17-07-2023 9.8	17-07-2023 9.8 20.6	17-07-2023 9.8 20.6 5244.00	17-07-2023 9.8 20.6 5244.00 8.7

\$105 (Ighuris) value has been put in the bomb calcrimeter as determined in the laboratory following (45TM 5 4239-18).

(by) State of the aspertment is performed by external service growler.

(a) This regard should not be replicated or reproduced.
(a) This regult related to the sample tested. However, part of the sample will be destroyed after three months.

CSB COMPR RC RANCHI (Authorised Signatory) [Dr. M.K.Seint]

ends as pur the website of the Winistry of cost (www.cost.inf.major-spits) for Josef grades, www.cost.jpcv.inf.major-spits) for Josef grades as pur the website of the Winistry of cost (www.cost.jpcv.inf.major-spits).

⁽i) Sample collected as per FSA.

⁽ii) Teating Method Editioned - Act & Middenies as per ASTM II-2382-15 & CCV as per ASTM II-5885-19, EM as per IS 1458 (Part-II): 1584 Novillement 2013



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 27.06.2023 TO 17.07.2023

LOADING END ANALYSIS REPORT FOR TOTAL MOISTURE

Date:17-08-2023

Loading Area/Siding-Bachra (Piperwar Area) Name of Coal Company- Central Coal Field Ltd. Test Report No.-CIMFR/RNC/TPS/BACH/NPGA/ JUNE-JULY/2023/19

Product tested - Coal Sample Date of start of analysis 44.08.2023 Power Utility-NTPC-NPGA

				Date of	73	Railway Rake/MGR *	R.
No.	Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date
14	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0244/WC	27-06-2023	03-07-2023	05-07-2023	3893.55	161003734	27-06-2023
2	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0289/WC	12-07-2023	17-07-2023	19-07-2023	3735.77	161003768	12-07-2023
w	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0290/WC	12-07-2023	17-07-2023	19-07-2023	3701.68	161003769	12-07-2023
4	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0291/WC	13-07-2023	17-07-2023	19-07-2023	3663.26	161003770	13-07-2023
5	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0293/WC	13-07-2023	17-07-2023	19-07-2023	3819.42	161003772	13-07-2023
6	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0296/WC	14-07-2023	17-07-2023	19-07-2023	3889,42	161003775	14-07-2023
7	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0300/WC	16-07-2023	17-07-2023	19-07-2023	3768.03	161003778	16-07-2023
00	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0302/WC	16-07-2023	17-07-2023	19-07-2023	3666.14	161003779	16-07-2023
9	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0303/WC	16-07-2023	17-07-2023	19-07-2023	3704.58	161003781	16-07-2023
10	CCL/BACH/NTPC-JV/NABINAGAR/NPGA/0304/WC	17-07-2023	17-07-2023	19-07-2023	3617.05	161003782	17-07-2023

Customer Provided Information

(ii) Sample collected as per FSA.

(ii) Testing Method followed - Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2013

(iii) None of the experiment is performed by external service provider.

(w) This report should not be replicated or reproduced.

(v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Dr. M.K.Saini)

CSIR-CIMER, RC, RANCHI (Authorized Signatory)

102 ent MAC: 00:60:0C:85:11:A1-Fri Aug 4 13:46:13 2023 Date: T-12260-Sample ID: Final Type: Dynamic Method: Determination Bomb ID: Mode: 957.137 EE Value: 29.5966 Initial Temp: Temp. Rise: 4:5964 30.0355 Jacket Temp: 0.0000. Spike Weight: 0.9937 Weight: 8.0000 Fuse: 50.0000 Acid: 0.5100 Sulfur: Gross Heat: 4357.41 Units Multiplie Units:

Sheela U18123

1019 38.23

CCL | BACH / NTPC-IV / NABINAGAR / NPGA 10244/WC

18° 823

Units:

Instrument MAC: 00:60:0C:85:11:A1 Sample ID: T-14030 Date: Fri Aug 11 07:09:00 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: 1 Initial Temp: 29.5782 EE Value: 957.137 Jacket Temp: 30.0035 Temp. Rise: 5.5212 Weight: 0.9979 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5200 Units Multiplier: 1 **Gross Heat:** 5225.82

cal/g

CCL BACHINTEC JV INABINA CAR INEGA 10289/wc/3/20223

192.168.1.122/run_list.php

Units:

Instrument MAC: 00:60:0C:85:11:A1 Sample ID: T-14031 Date: Fri Aug 11 07:18:46 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: 1 Initial Temp: 29.4598 EE Value: 957.137 Jacket Temp: 29.9910 Temp. Rise: 5.5352 Weight: 0.9963 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5300 Units Multiplier: 1 **Gross Heat:** 5247.45

Scharwing 23

cal/g

CCL BACH | NTPC - IV | NABINACAR INPCA (0290) WC

MAS 8.23

192.168.1.122/run_list.php

Units:

Instrument MAC: 00:60:0C:85:11:A1 Sample ID: T-14032 Date: Fri Aug 11 07:28:57 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: 1 Initial Temp: 29.5905 EE Value: 957.137 Jacket Temp: 29.9990 Temp. Rise: 5.5043 Weight: 0.9923 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5400 Units Multiplier: Gross Heat: 1 5238.60

Maring 93

cal/g

18/8/08.23

CCL BACH INTOC-TUINABINACHE INDOA 10291 INC

M9 08.23

192.168.1.122/run_list.php

Instrument MAC: 00:60:0C:85:11:A1 Sample ID: T-14034 Date: Fri Aug 11 07:49:24 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: 1 Initial Temp: 29.7929 EE Value: 957.137 Jacket Temp: 30.0179 Temp. Rise: 5.4771 Weight: 0.9935 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5300 Units Multiplier: Gross Heat: 1 5206.33 Units:

cal/g

CUL BACH INTECTOV I NABINACAR INPCA 10293 WC 71.08.23

192.168.1.122/run_list.php

instrument MAC: Date:

00:60:0C:85:11:94

T-14037

Fri Aug 11 10:14:46 2023

Method:

Dynamic

Type:

Mode:

Determination

Bomb ID:

Final

Initial Temp: Jacket Temp:

Units Multiplier:

Sample ID:

30.3644

EE Value:

935.072

Weight: Fuse:

30.1781 0.9996 Temp. Rise: Spike Weight: 5.4846 0.0000

Sulfur:

50.0000 0.5400

1

Acid: 8.0000

Gross Heat: Units:

5060.38 cal/g

CCL BACH NTPC-IV NABINACAR NPGA 10296 WC

Instrument MAC: 00:60:0C:85:11:94 Sample ID: T-14041 Date: Fri Aug 11 10:59:17 2023 Method: Dynamic Type: Final Mode: Bomb ID: Determination 1 Initial Temp: 30.5443 EE Value: 935.072 Jacket Temp: 30.3013 Temp. Rise: 5.6972 Weight: 0.9939 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5400

1

Gross Heat: 5289.52 Units: cal/g

5000 23

CCL BACH INTEC. JU MABINACAR MPCA (0300) WC

Units Multiplier:

105

Instrument MAC: 00:60:0C:85:11:94 Sample ID: Date: T-14043 Fri Aug 11 11:23:42 2023 Method: Type: Dynamic Final Mode: Determination Bomb ID: 1 Initial Temp: 30.5968 EE Value: 935.072 Jacket Temp: 30.3392 Temp. Rise: 5.5722 Weight: 0.9983 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5100

1

Units Multiplier:

Gross Heat: 5149.68 Units:

cal/g

CCL | BACH | NTPC-JY | NABINACAR | NPCA 10302 | WC

Instrument MAC: 00:60:0C:85:11:A1 Sample ID: T-14044 Date: Fri Aug 11 11:59:26 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: 1 Initial Temp: 30.4364 EE Value: 957.137 Jacket Temp: 30.2329 Temp. Rise: 5.5279 Weight: 0.9925 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5300

1

Units Multiplier:

Gross Heat: 5260.59 Units: cal/g

> 500023 11-8-23

CCL IBACH | NTPC-JY | NABINACIAR INPCA 10303 | WC

107

Instrument MAC: 00:60:0C:85:11:94 Sample ID: T-14045 Date: Fri Aug 11 11:49:41 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: 1 Initial Temp: 30.2125 EE Value: 935.072 Jacket Temp: 30.1385 Temp. Rise: 5.6641 Weight: 0.9967 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5200

1

Units Multiplier:

Gross Heat: 5244.00 Units: - cal/g

Sciba 3

CCL | BARH | NTPC - IV | NABINAGAR | NPGA | 0304 | WC

19 08 23



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 28.06.2023 TO 29.06.2023

LOADING END ANALYSIS REPORT

Date:05-09-2023

29-06-2023 03-08-2023	28-06-2023 03-08-2023	+	Date of Date of collection preparation		Date of star Product test
23 07-08-2023	C2 07-80-70	+	on receiving at laboratory	Date of	Date of start of analysis -29.08.2023 Product tested - Coal Sample
4036.20	01.0404	4043 70	R.R. Quantity (Mt)	70	1023
161000732	With A company of the	161000730	R.R.No./F. Note No.	Railway Rake/MGR *	
161000732 30-06-2023		29-06-2023	R.R. Date	AGR *	
8.8	Т	8.6	M.		
32.1		33.0	ASH %	Air-dried basis	Relative H
35.013#	40000	4388.83	GCV (local/kg)	asis	Relative Humidity of laboratory: Temperature of laboratory:
1	20	7.6	N.	(60%)	sboratory:
200	20 4	33.4	ASH%	0% RH & 40°C	2
	4261	4437	GCV (kcal/kg)	0,0	28.5°C
1	E	ð	Grade **	Analysed	

Customer Provided Information.

CCI/BALUMATH/NTPC-JV/NABINAGAR/NPGA/0159/G-11 CCL/BALUMATH/NTPC-JV/NABINAGAR/NPGA/0157/G-11

Sample ID

Name of Coal Company- Central Coal Field Ltd.

Loading Area/Siding-BALUMATH

Test Report No.-CIMFR/RNC/TPS/BCBM/NPGA/JUNE/2023/07

**Grade as per the website of the Ministry of coal (www.coat.nic.in/regor-statistics/coal-grades, www.coat.gov.in/major-statistics/coal-grades)

(i) Sample collected as per FSAL

6) Testing Method followed - Auh & Moldane as per ASTM D-7582-15 & GCV as per 05TM D-5885-19, EM as per 15 11/0 (Partil): 1954 Restfirmed 2013

(BI)Sulphur(s) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4335-18).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months

CSIR-CIMPR, RC, RANCH (Authorized Signatory) (Dr. M.K. Salni.)



सीएसआईआर-केंद्रीय खनन एवं ईपन अनुसंधान संस्थान अनुसंधान केंद्र, रांची ,पोस्ट-नामकुम, रांची -834010 CSIR-CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI-834010



Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 28.06.2023 TO 29.06.2023

LOADING END ANALYSIS REPORT FOR TOTAL MOISTURE

Date:05-09-2023

Test Report No.-CIMFR/RNC/TPS/BCBM/NPGA/JUNE/2023/07 Name of Coal Company- Central Coal Field Ltd.

Loading Area/Siding-BALUMATH

Power Utility- NTPC-NPGA
Date of start of analysis -29.08.2023
Product tested - Coal Sample

2	-	No.	3
CCL/BALUMATH/NTPC-JV/NABINAGAR/NPGA/0159/G-11	CCL/BALUMATH/NTPC-JV/NABINAGAR/NPGA/0157/G-11	Sample ID	3
29-06-2023	28-06-2023	Date of collection	
03-08-2023	03-08-2023	Date of preparation	
07-08-2023	07-08-2023	sample receiving at laboratory	Date of
4036.20	4043.70	R.R. Quantity (Mt)	Ra
161000732	161000730	R.R.No./ F. Note No.	Railway Rake/MGR
4036.20 161000732 30-06-2023 13-0	161000/30 29-06-2023	R.R. Date	1GR *
13.0	COT	SI 8000	0

Customer Provided Information

Note

(i) Sample collected as per FSA.

(ii) Testing Method followed - Total Moisture as per IS 1350 [Part-I], 1984 Reaffirmed 2013

(iii) None of the experiment is performed by external service provider.

(iv) This report should not be replicated or reproduced.

(v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Dr. M.K. Saini) (Authorized Signatory) CSIR-CIMFR, RC, RANCHI

Instrument MAC: 00:60:0C:85:11:A1 Sample ID: T-16561 Date: Tue Aug 29 13:52:44 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: Initial Temp: 29.8003 EE Value: 953.615 Jacket Temp: 30.0530 Temp. Rise: 4.6334 Weight: 0.9909 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5200 Units Multiplier: Gross Heat: 1 4388.83 Units: cal/g

> Madhulika 2918123

CCL BALUMATH | NTPC-JV | MABINAGAR | NPCD | 0157

14-11

Instrument MAC: 00:60:0C:81:07:1F Sample ID: T-16563 Date: Tue Aug 29 03:59:04 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: 1 Initial Temp: 29.9462 EE Value: 929.396 Jacket Temp: 30.0132 Temp. Rise: 4.5962 Weight: 0.9960 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.5200 Units Multiplier: 1 **Gross Heat:** 4218.92 Units:

cal/g

CCL BALUMATH INTPC TY NABINACIAR INPCA 10155 C. PUTO923

w N



RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI-834010 CSIR. CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH सीएसआईआर-केदीय खनन एवं ईंघन अनुसंधान संस्थान अनुसंधान केंद्र, रांची ,पोस्ट-नामकुम, रांची -834010



TC-5897

Analytical results of cost samples collected by CSIR-CIMER [Third Party Sampling) during the period 01.07.2023 TO 08.07.2023

LOADING END ANALYSIS REPORT

Name of Coal Company- Central Coal Raid List. Looding Area/ Siding: 8CM (Piperwar Arco) CCL/RCM/NTPC-IV/NABINAGAR/NPGA/0181/G-11 CCL/RCM/NTPC-JV/NABINAGAR/NPGA/0180/G-9

> collection Date of

preparation

receiving at

laboratory

Quantity

R.R.No./ F.

Note No.

R.R.

Railway Rake/MGR

Date of

aliquies Date of

일 등

Text Region No. - CEMPROSMOTERS/HOW/NESS/JULY/2003/19

Door of shart of analysis -04-08-2023 VOUNTAIN VAILED AND VALUE OF VAILED AND VAIL Product rested - Coal Sarepie

Relative Humidity of laboratory.

NAM.

Date: 14-08-2023

	Alr-dried basis	Temperature of laborati
AND THE REST OF THE PARTY OF TH	Equilibrated moisture basis (60% RH & 40°C	3,116

R *		Air-dried bask	bask	Equil	Equilibrated moisture basis (60% RM & 40°C)	& 40°C)	
R.R. Date	Z Z	% HSV	GCV (kcal/kg)	×	ASH%	GCV (kcal/kg)	Analysed Grade **
02-07-2023	91	26.4	4749.26	7.7	26.8	4822	egy.
02-07-2023	7.6	35.8	4057.75	61	36.4	4124	G1+
09-07-2023	7.8	33.9	4156.46	7.0	34.2	6193	611
09-07-2023	7.2	37.8	3893.39	7.5	37.7	3881	G12

CUR-CIMIN, RC, RAWCHI (Authorized Signatory) [Hi]Sulphur(s) value has been put in the bomb colorimeter as determined in the laboratory following JASTM D 4739-18.

(i) Sample collected as per PSA.

Customor Provided information

CCL/RCM/NTPC-JV/NABINAGAR/NPGA/0184/0-11 CCL/RCM/NTPC-IV/NABINAGAR/NPGA/0183/G-11

[8] Testing Method followed: - Ach B. Melsturg as per ASIM D-7582-15 B. GCV as per ASIM D-7685-19, EM as per B-1150 (Part-I): 1994 Restituted 2011

"" Grade as yet the website of the Ministry of and (www.coal.nk.hy/major-staffithy/coal-grades, www.coal.gov.ny/major-staffithy/coal-grades)

09-07-2023 08-07-2023 02-07-2023 01-07-2023

13-07-2023 13-07-2023 11-07-2023 06-07-2023

14-07-2023

14-07-2023

3456.33 3817.30 3699.81 3978.34 DIME DIME

161001466 161001465

11-07-2023 14-07-2023

161001462 161001463

(v) This report should not be replicated or reproduced. [hi] have of the experience is performed by external service provider.

(vi) The result related to the sample tested. Reserve part of the sample will be distinged after those months

(Dr. W.K.Salai)

END OF TEST REPORT

No. SI.



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 01.07.2023 TO 09.07.2023

LOADING END ANALYSIS REPORT FOR TOTAL MOISTURE Date: 14-08-2023

Name of Coal Company- Central Coal Field Ltd. Test Report No.-CIMFR/RNC/TPS/RCM/NPGA/JULY/2023/19 Loading Area/ Siding: RCM (Piperwar Area)

> Date of start of analysis -04-08-2023 Power Utility-NTPC-NPGA

Product tested - Coal Sample

14 07 2022 2017 70	CCL/RCM/NTPC-JV/NABINAGAR/NPGA/0183/G-11 08-07-2023 13-07-2023 14-07-2023 3456.33	CCL/RCM/NTPC-JV/NABINAGAR/NPGA/0181/G-11 02-07-2023 11-07-2023 14-07-2023 3699.81	CCL/RCM/NTPC-JV/NABINAGAR/NPGA/0180/G-9 01-07-2023 06-07-2023 11-07-2023 3978.34	Sample ID Date of Date of sample R.R. collection preparation receiving at laboratory (Mt)	Date of
- 3	_	_		pre	
13-07-2023	1300	-	-07-2023	paration	恢
14-07-2023	14-07-2023	14-07-2023	11-07-2023	receiving at laboratory	Date of
3817.70	3456.33	3699.81	3978.34	R.R. Quantity (Mt)	77
161001466	161001465	161001463	161001462	R.R.No./ F. Note No.	Railway Rake/MGR *
09-07-2023	09-07-2023	02-07-2023	02-07-2023	R.R. Date	MGR *
12.8	12,9	12.1	12.4	TMS 4	4

Customer Provided Information

4 w N

Sample collected as per FSA.

(ii) Yesting Method followed - Total Molsture as per IS 1350 (Part-II, 1984 Reaffirmed 2013

[iii) None of the experiment is performed by external service provider.

(iv) This report should not be replicated or reproduced.

(v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Dr. M.K.Sairsi)

(Authorized Signatory) CSIR-CIMFR, RC, RANCHI

Customer Provided Information

CCL/PLCP/NTPC-JV/NABINAGAR/NPGA/01067/G-9

(i) Sample collected as per FSA.

(ii) Testing Medical Collowed: Ach & Moisture as per ASTM D-7582-15 & GDV as per ASTM D-5865-39, FM os per IS 1350 (Part-I): 1364 Reeffirmed 2013 (I)(Sulphorly) value has been pot in the bomb colorimeter as determined in the liaboratory following (ASTM D-4239-16).

**Grade as per the website of the Ministry of roat Javan.co.d.nic.ln/major-statistics/cos*grades, www.cost.gov.in/major-statistics/cost-grades)

26-10-2023

10-11-2023

collection

preparation

(vii) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(v) This report should not be replicated or reproduced.

(iv) Name of the experiment is performed by external service provider.

N 10

Sample ID



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 26.10.2023

LOADING END ANALYSIS REPORT

Date of Date of start of enalysis -23.01.2024 Product tested - Coal Sample Power Billity: Nabinagar Suppor Thermal Power Project. Date of Date of

Nienta of Coal Company: Central Coal Field Ltd.

Loading Area/Siding-PHULBASIA

Test Report No.-CUMPA/BNC/TPS/PLCP/NP6A/ OCT/2023/03

receiving at 14.11.2023 laboratory sample Quantity 4022.43 3 Railway Rake/MGR * 161001776 R.R.No. F. Note No. 27-10-2023 R.R. Date XN Air-dried basis ASH % Temperature of laboratory: 30.7 4530.48 (kcal/kg) 50 Equilibrated moisture basis 7.5 NS. (60% RH & 40°C) ASH% 30,9% (kcal/kg) 4468 5 Grade ** Analysed 610

Relative Humidity of laboratory:

54%

Date:29-01-2024

(Sub-Config. RC, sAMCH) (Or. M. K. Saint) 29011201.9r 115



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 26.10.2023

LOADING END ANALYSIS REPORT FOR TOTAL MOISTURE

Date:29-01-2024

No. SI. Loading Area/Siding-PHULBASIA Name of Coal Company- Central Coal Field Ltd. Test Report No.-CIMFR/RNC/TPS/PLCP/NPGA/ OCT/2023/03 Sample ID

> Date of start of analysis -23.01.2024 Power Utility- Nabinagar Supaer Thormal Power Project,

Product tested - Coal Sample

26-10-2023 10-	Date of D	
10-11-2023	Date of preparation	
14.11.202	sample receiving at laboratory	Date of
3 4022,43	R.R. Quantity (Mt)	ZO.
161001776 27-10-2023 12.5	R.R.No./ F. Note No.	Railway Rake/MGR
27-10-2023	R.R. Date	3R *
12.5	TM%	

(Dr. M. K. Saini

CSIR-CIMFR, RC, RANCHI (Authorized Signatory)

(v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(iv) This report should not be replicated or reproduced.

(III) None of the experiment is performed by external service provider.

(ii) Testing Method followed - Total Molsture as per IS 1350 (Part-I), 1984 Reaffirmed 2013

Sample collected as per FSA.

Customer Provided Information

CCL/PLCP/NTPC-JV/NABINAGAR/NPGA/01067/G-9



सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान 120k-Central Institute of Mining and Fuel Research

(वैज्ञानिक तथा वीडोरिक अनुस्थान गरिया) प्राचा गेर, धनवार - 826 015, झानवण्ड भारत एक श्राई एस औं 9001 प्रमाणित संस्थान

(Council of Scientific and Industrial Research) Barws Road, Dharbad - 826015, Jitarkhand, India An IBO 9001 Certified Institute



Date of insue: 1209,2023



LAB NAME: Coal Characterization Lab. (RQA).

ULR No.-TC-104352300013760F

LOADING END ANALYSIS REPORT

Test Report No.-CIMERODEN/TPS-LD/SEP1/23-24-13760 A

Name of Coal Company-BIRRAT COKING COAL LIMITED

Loading Area Siding-BARCHA, KKC LINK

Name of Fower Utility-NPGA, NPGC

Duration of Performance of Analysis: 07.09.2023 to 11.09.2023

Test Montrial: COAL.

Relative Humidity of laboratory(%): 518 Temperature of laboratory(*C): 33.6

De	Denief	633735	Dur of panyle		olway Robe M	GIL		Air-deseal 0	mçês .		rocket rends No. 100 Link	eurs beek (IPC)	Analysed	
8. No	Serrole ID	Sampling (Collection)	preparation	interiory laboratory	RH Quantity (Mt)	E.R.Nu./ F. Num No.	R.R. Data	M%	ASSES	GCV (Ked/kg)	Wh.	ASHS	GCV (Ked/kg)	Grade
1/2	POCP-W-V	17.03,2023	17.07.2013	19.07.2023		255358		1.1	29.9	5632.38	1,1	29.9	5632	G6
2	TPS/L/12593 BOCP-W-IV	27.03.2023	17.07.3023	19307,20123		255558		1.0	349	5171.38	0.9	349	5177	GN

None

(i) Sample collected as per PSA by CSIR-CIMFR

(ii) Ash , Meinters (air-dried) as per ASTM D 7582-15

(iii) Equilibrated Meisture (60% RH & 40°C) as per IS (350 (Part-I), 1984 Reafficeed 2019.

(iii) Gross caloriffe value (GCV; air-dried) as per ASTM D 5865-19

(iv) Note of the experiment is performed by external service presider
 (v) This report should not be replicated or reproduced

(Signature of Authorized Signatury)

सी॰ एस॰ आहे॰ आहे॰ केन्द्रीय खनन एवं हुँघन अनुसंघान सल्यान CSER Central Institute Of Militing & Fuel Research Gest, Of India, Dianhad P.O. E.R.L. PIN-828108, Markhand

and of Report.

HQ: Dhanbad - 🕿 +91-326-2296023, 2296006 (O) | +91-326-2296025 EPBAX | +91-326-2296012/6013/6027/6028

E-mail: director@cimfr.nic.in, Digwadih Campus 2 +91-326-2381111

Research Centres: Bilaspur: 當 +91-775-2271450, Nagpur Unit I - 曾 +91-712-2510604, Unit - II - 曾 2510390 Ranchi: 當 +91-651-2461392, Roorkee: 當 +9101332-276998

Website : www.cimfr.nic.in



(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद) वरवा गेर, बनवाद - ३२६ ६१५, झारखण्ड, भारत एक अहं एन जो २३०१ प्रमाणित संस्थान



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Date of issue: 12.19.2021

TEST REPORT

LATI NAME: Coal Characterisation Lab. (RQA). LOADING END ANALYSIS REPORT Test Report No.- CIMFR/DHN/TPS/LD/SEP1/24-24/13766 B Name of Coal Company BHARAT COKING COAL LIMITED Leading Area/Siding BARORA, KKC LINK Name of Power Utility-NPGA, NPGC Test Staterial : COAL

		Day of	- 1	Kalione Rubic N	IGR	Y and Williams
8.Nt	Sample 100	Sampling (Collection)	RR Quality (NII)	RJIDe/ F. Spie Su-	R.H. flate	16
1	TPS/L12892 TOCP-W-V	27,03,2023		255358		34
2	198/1.12593 DOCESW-IV	27 03,2023		155358		3.6

(i) Sample collected as per FSA by CSER-CIMER

(ii) Total Moisture as per 18 1350 (Part I), 1984 Reafffrrent 2019

(iii) None of the experiment is performed by external service previder

(iv) This expect should not be replicated or regreduced

(Signature of Authorized Signatury)

सी॰ एस॰ आई॰ आर॰ केन्द्रीय जनन एवं ईंधन अनुसंधान सत्धान CSIR-Contrat Institute Of Mining & Fuel Research Geer, Of India, Dhanbud P.O. F.R.L. PIN-528195, Jharkhand



सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान CSIK-Central Institute of Mining and Fuel Research

वैक्सिक नवा औद्योगिक अनुसंधान परिषद्ध। बरवा गीर बनवाद - 826 015 जालकाद, भारत एक इस एम को १३०१ प्रमाणित गरेबान



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Date of Issue: 23.08.2023

TEST REPORT

TC-10415

LAB NAME: Coal Characterisation Lab. (RQA) ULR No.-TC-104352300012561F LOADING END ANALYSIS REPORT Test Report No.- CIMER/DHN/TPS/LD/ACG/23-24/12561 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Louding Area/Siding-NIGAHL NIGAHI WHARFWALL Name of Power UPIG- NEPC, NABINAGAR (NTPC, VINDHYACHAL) Duration of Performance of Analysis: 14.08.2023 to 22.08.2023 Test Material: COAL

> Relative Hamidity of laboratory(%): 52.0 Temperature of laboratory N. k. 22.5.

i Ti			0			talway Rake/ MG	n .		Air-dried b	0.66	Fig. 8 Sec.	all Supplier	hormalité de T	Audyus
a.n.	Sample 101	Date of Stampling (Collection)	Date of proposition	Park of receipts possibling at behindeling	RR Questir (Va)	RANG F.Nas Na.	R.R. Duk	и».	ASES	GEV (Ker/Gal	M/L	ASSES	GCV (Km/hg)	Crade
1	TPS/LINGS	41,07,2023	02.07.2023	07,07,2023		000075	200100	14	24.4	3001.36	8.5	245	49.12	68
2	TPS/L11000	41/07/2023	63,07,2693	07,85,2623		066076		7.6	24.3	5046.23	8.6	240	4992	C8
1	TPS/L11076	93,97,2923	64.61.2023	07,07,2023		060077		6,6	27.0	4915.13	2.6	36.7	4961	69

Note:

(i) Nample collected as per FSA by CSIR-CIMFR

(iii) Ash., Moisture (att-dried) as per ASTM 0 7582-15

(iii) Equilibrated Masture (60% RH & 40°C) as per 15-1350 (Pert. I), 1984 Resilliented 2019

(iii) Gross calorific value (GCV: sir-dried) so ger ASTM D 5865-19

(iv) None of the experiment is performed by external service provides

(v) This report should not be replicated or reproduced

(Signature of Authorized Signatury)

बीं पूर्ण आहे. जारू- नेनीय साथ पूर्व होता अनुस्थान सामान CSIR-Central Invitoire Of Mining & Finel Research Govt. Of India, Bhashad P.O. F.R.L. PIN-825108, Jhurkhand.

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E-mail: director@cimfr.nic.in. Digwadih Campus 2 +91-326-2381111

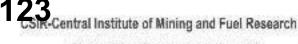
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Website: www.cimfr.nic.in



सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान

(वैद्यानिक तथा ओवांपिक अनुसंबन परिधर) बरवा रोड, धनबार - 826 ३१५, झारछण्ड, भारत एक आई एम जो १०११ प्रमाणित संस्थान



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Date of issue: 23.08.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA) LOADING END ANALYSIS REPORT Test Report No.- CIMER/DHN/TPS/LD/AUG/23-14/12561/B Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-NIGAHL NIGAHI WHARFWALL Name of Power Utility- NTPC, NABINAGAR (NTPC, VINDHYACHAL) Test Material: COAL.

	2.7	8	п	alway Rule? NO	n.	
a.n	Surpelle	Dazet Sempling (Columbia)	RR Cently (No.	RIBANA F None Na.	ви паз	Total Malazare N
	TPS/LUNG	01.07.2023		000075	The state of the s	14.5
7	TPSCTIMA	01.07.2023		900076		15.2
3	TPS41.11076	03.07.2023		910077		15.1

- (i) Samplic collected at per FSA by CSIR-CIMFR
- (ii) Total Mointury as per IS 1350 (Part-I), 1984 Reaffirmed 2019
- (III) None of the experiment is performed by external service provider
- (iv) This report should not be replicated or regraduced

(Signature of Authorized Signatury)

बीर कर आर्थेर अस्ट- केसीन करा एवं होता. संप्राचन सम्बद्धा USBI-Central Institute Of Mining & Fuel Research Gove Of India, Bhanhad

P.O.-P.R.L. PIN-828108, Harkband



सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान 🕶 CSIR-Central Institute of Mining and Fuel Research

विज्ञालक नवा जोवांगिक अनुसंबान परिप्रता बरवा रीत. यसबाद - 826 015, हारखण्ड, पारत एक जाई पम ओ ५००। प्रमालेल संस्थान

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TEST REPORT

Date of issue: 28.02.2024

LAB NAME: Coal Characterisation Lab. (RQA) ULR No.-TC-104352300024135F LOADING END ANALYSIS REPORT Tost Report No. CIMER/DHIN/TPS/LINFEB/23-24/24135 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Leading Area/Saling-DUDIDCHUA, DUDINCHUA WHARPWALL Name of Power Contry-NTPC, NABINAGAR (NTPC, YENDRYACHAL) Duration of Performance of Analysis; 22.02.2024 to 27.02.2024 Test Material: COAL

Referive Hamilely of laboratory (% is 52 to

		2002				Rating Rate MCS			2000	Tring	Persoure	o'hban	Mony Pulk	22,5
R. Re	Sample in	Sampling	Date of	Bate of sample receiving at	AR Quinto	RRND			Air-dried	467	0	AUA	6-03	Awter
1	TPS/L22996	National Autorities	Priparation	Independent	-94t)	E Smalle	R.R. Dec	Miles	ANIEN	GCv (Knoba)	8014		acv	Grade
80		14,19,3623	18,50,2023	21.16,3023		2000037		8.8	13.9	5081.53	I.I.	0.022	(Kcal/lg)	3775
2	TPS/L22001	15.10,2023	19.10.2023	21.10.3025		2004222		3237		Jan.	A.I.	243	5091	168
3	TPS/L23044	15.10.3023	19,10,2023	No.				13	27.9	4764,52	8.6	27.9	4770	G9
4	***************************************		17(10(202)	31.16.2923		3000225		K.I	26.6	4863.88	1.0	26.7	4874	159
2	TPS/L23006	16.10,2023	19.10.2023	21.14.2025		2000237		7.9	70.0	Application of	-		20.04	100
de				-				7.0	26.9	4582.11	7.7	27,0	4852	GS

(f) Sample extlected as per FSA by CSER-CIMFR

(ii) Ast , Moissare (air-cried) as per ASTM D 7582-15

(III) Equilibrated Moisture (48%, RH & 49°C) as per IS 1350 (Part-I), 1984 Resiftmed 2019 (iii) Green calculfe value (GCV) air-dried) so per ASTM D \$865-19

(iv) Nose of the experiment is performed by external service provider (v) This report should not be replicated or reproduced.

(Signature of Authorized Signatury)

के हुए। बाई: अर्थ: नेव्यंत कान हा क्रेस अनुस्थान स्रोताः CSIR-Central Institute Of Missing & Fuel Research Gove, Of India, Deveload P.O. F.R.L. PIN-KISIOS, Jherkhand

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सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान 25. CSIK-Central Institute of Mining and Fuel Research

वैज्ञानिक तथा औद्योगिक अनुसंधान परिपर। वरवा सेंह. बनबाद - 826 २१५, झरसाग्ड, मारत एक अर्थ एम ओ ३००१ प्रमाणित संस्थात

(Council of Scientific and Industrial Research) Barwa Road, Dhanbad - 826015, Jharkhand, India An ISO 9001 Certified Institute



TEST REPORT

Date of issue; 28.02.2024

LAB NAME: Cost Characterisation Lab. (RQA) LOADING END ANALYSIS REPORT Toot Report No. CIMPR/DHN/TPS/LD/PEB/23-24/24135 B Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding- DI-DHICHUA, DUDHICHUA WHARFWALL Name of Power Unity- NTPC/NABINAGAR (NTPC/VENDHYACHAL) Test Material: COAL

				Ballery Rate/MGE		
		Date of Sampling	Rit Ouncity	R.R.No./		W
81.5%	Seeperts	(Collection)	(Mr)	F. Note No.	R.H. DOW	Total Montage Si
1	TPS/1.22996	14,19,2023	(C.	2000217		15,9
2	TPS/121001	15.10,2023		2000222		15.6
3	TP8/L25064	15.18.2013		2000225		15,8
4	TPS/L33006	16.10.2023		2000227		16.1

Note:

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Total Maisture as per 35 (350 (Part-I), 1984 Reaffirmed 2019

(iii) None of the experiment is performed by supersel service provider

(by) This report absold out he replicated or reproduced

(Signature of Authorized Signatory)

the pay and were trade used pit the septem years CSIR-Central Institute Of Mining & Facil Research. Gove Of India, Dharitat P.O. F.R.L. PEN-828108, Markhand

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E-mail: director@cimfr.nic.in, Digwadih Campus @ +91-326-2381111

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Website: www.cimfr.nic.in



सीएसआईआर-केंद्रीय खनन वर्व्यक्त अनुसंधान संस्थान अनुसंधान केंद्र, रांची ,पोस्ट- नामकुम, रांची -834010

CSIR- CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI- 834010



TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 14.05.2023

LOADING END ANALYSIS REPORT

Test Report No.-CIMER/RNC/TPS/NPGA/MAY/2023/07 Name of Coal Company- Mahanadi Coal Field Ltd. Loading Area/Siding-Lakhannur Area-BOCM

Power Utility-NTPC JV NSTPS Date of start of analysis - 28.06.2023

Product tested - Engl Sample

Relative Humidity of laboratory:

Date:30-06-2023

	The state of the s		Tradeci Hadieu - Co	Jangae	4				Temperatu	re of laboratory	1		26.2°C	
SI.	70000,000	Date of	Date of	Date of sample	F	Railway Rake/I	MGR *	78	Air-dried ba	isis	14 10 10 199 19	ated mois 0% RH & 4	ture basis (O'C)	
No.	5ample ID	collection	preparation	receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	M %	ASH %	GCV (kcal/kg)	M%	ASH%	GCV (kcal/kg)	Analysed Grade **
1	MCL/BOCM-7/05/2023/NPGA11(L)/G-14	14-05-2023	15-05-2023	19-05-2023	3760.49	162008642	15-05-2023	5.3	43.3	2420.52				
12	* Customer Provided Information							3.3	43.3	3478-67	7.9	42.1	3383	G14

^{**}Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

Note:

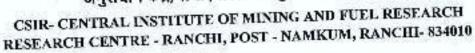
- (i) Sample collected as per FSA.
- (ii) Testing Method followed Ash & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Part-I): 1984 Realfirmed 2013
- (ii)Sulphur(s) value has been put in the bomb calorimeter as determined in the laboratory following (ASTMID 4239-18).
- (iv) None of the experiment is performed by external service provider.
- (v) This report should not be replicated or reproduced.
- (vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Authorized Signatory) CSIR-OMER, BC, RANCHI



127 सीएसआईआर-केंद्रीय खनन एवं ईंधन अनुसंधान संस्थान

अनुसंधान केंद्र, रांची ,पोस्ट- नामकुम, रांची -834010





Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 14.05.2023

LOADING END ANALYSIS REPORT FOR TOTAL MOISTURE

Test Report No.-CIMFR/RNC/TPS/NPGA/MAY/2023/07

Name of Coal Company- Mahanadi Coal Field Ltd.

Loading Area/Siding-Lakhanpur Area- BOCM

Power Utility-NTPC JV NSTPS

Date of start of analysis - 28.06.2023

Product tested - Coal Sample

Date:30-06-2023

234		A 8		Date of		Railway Rake/M	MGR *	
SI. No.	Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	TM%
1	MCL/BOCM-7/05/2023/NPGA11(L)/G-14	14-05-2023	15-05-2023	19-05-2023	3760.49	162008642	15-05-2023	12.3

^{*} Customer Provided Information

Note

- (I) Sample collected as per FSA.
- (ii) Testing Method followed Total Molsture as per IS 1350 [Part-I), 1984 Reaffirmed 2013
- (iii) None of the experiment is performed by external service provider.
- (iv) This report should not be replicated or reproduced.
- (v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Dr. S.K. Warkhade)

(Authorized Signatory)

CSIR-CIMFR, RC, RANCHI

128ument MAC: 00:60:0C:85:11:94 Sample ID: Date: Wed Jun 28 09:13:28 2023 T-5916 Method: Type: Dynamic Final Mode: Bomb ID: Determination 1 Initial Temp: EE Value: 29.9982 931.036 Jacket Temp: -29.9940 Temp. Rise: 3.7884 Spike Weight: Weight: 0.9936 0.0000 Fuse: Acid: 50.0000 8.0000 Sulfur: 0.5700 Units Multiplier: 1 Gross Heat: 3478.67 Units: cal/g

Astrolas

MCL BOCK - 7/05-2023/NPMA 11(L)/11-14.



सीएसआईआर-केंद्रीय खनन एवं ईंधन अनुसंधान संस्थान अनुसंधान केंद्र, रांची ,पोस्ट- नामकुम, रांची -834010 CSIR- CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI- 834010



TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 15.05.2023 to 05.06.2023

LOADING END ANALYSIS REPORT

Name o	Test Report NoChiftr/ENC/TP5/NPGA/MAY & JUNE/2023/10 Name of Coal Company - Mahanadi Coal Fleid Ltd. Loading Area/Siding-takhanpar Area-BOCM	•	Prower utility-MTPC IV NSTPS Date of start of analysis -07:07.2023 Product texted - Coal Sample	NY NSTPS hysis - 07,07,2023 aal Sample		tailway Rako	2	week.				Temperature of laboratory:	Temperature of laboratory:	
2				Date of	_	Railway Rake/MGR	1 5	GR.			GR • Air-dried basis	Air-dried basis	Air-dried basis	Air-dried basis
No.	Sample ID	collection	preparation	receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Nate Na.		R.R. Date	R.R. Date M%		W.	M% ASH%	M % ASH % (kcal/kg)	M % ASH % GCV M%
	MCL/BOCM-7/05/2023/NPGA12(L)/G-14	15-05-2023	16-05-2023	20.05.2023	22000	143000000		16 06 3033	16.06.3033	+		50	50	
2	MCL/BOCM-7/05/2023/NPGA14(11/G-14	26.05.2023	27.05.2022	21 05 2022	00.00	303000000		2000	+				200	West, and
	MCL/BOCM-6/06/2023/NPGA01/11/G-14	04.06.3033	CLOL 30 CO	2000 2000	-		_				0.00	000,000	000,000	400 000000
	MCI (BOCK) 3/06/2023/NF GNOT(L)/G-14	01-06-2023	02-06-2023	07-06-2023	3925,03	162008705		02-06-2023	02-06-2023 5.6		5.6	5.6 47.0	5.6 47.0 3313.73	5.6 47.0 3313.73 5.7
4	MICL/BOCM-5/06/2023/NPGA0Z[L]/G-10	05-06-2023	06-06-2023	09-06-2023	3804.67	162003990		06-06-2023	06-06-2023 8.1	t,	8,1	8,1 26,3	8,1 26,3 4778.86	8.1 26.3 4778.86 7.7

^{**}Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

A STATE OF THE PARTY OF THE PAR

(Dr. M. K. Seini) (Authorized Signatory) CSIR-CIMFR, RC, RANCHI

⁽i) Sample collected as per FSA.

⁽ii) Testing Method followed - Auh & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-8865-10, EM as per IS 1350 [Part-II; 1984 Reaffirmed 2013 (iii)Sulphur(s) value has been put in the hamb calonimeter as determined in the laboratory following (ASTM D 4239-18).

⁽hr) None of the experiment is performed by external service provider.

⁽v) This report should not be replicated or reproduced.

⁽M) The result related to the sample tested. Reserve part of the sample will be destroyed after three months

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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 15.05.2023 to 05.06.2023

LOADING END ANALYSIS REPORT FOR TOTAL MOISTURE

Test Report No.-CIMFR/RNC/TPS/NPGA/MAY & JUNE/2023/10
Name of Coal Company- Mahanadi Coal Field Ltd.
Loading Area/Siding-Lakhanpur Area-BOCM

Power Utility-NTPC IV NSTPS
Date of start of analysis - 07.07.2023
Product tested - Coal Sample

Date:14-07-2023

127

	+	MCL/BOCM-7/05/2023/NPGA12(L)/G-14 MCL/BOCM-7/05/2023/NPGA14(L)/G-14 MCL/BOCM-6/06/2023/NPGA01(L)/G-14				
MCC/00CM-5/06/2023/NPGA02(L)/G-10	MCI /BOCM 3 /OC /2023/NPGA01(L)/G-14	MCI /BOCM = /05/2023/NPGA14(L)/G-14	MCI /BOCM 7/05/2023/NDC 244/1//C-14	MCL/BOCM-7/05/2023/NBGA12/11/G 14	Sample ID	
05-06-2023		26-05-2023	15-05-2023	40 00 0000	collection	
06-06-2023	02-06-2023	27-05-2023	16-05-2023		preparation	
09-06-2023	07-06-2023	31-05-2023	20-05-2023	- WINDS TO THE PARTY OF THE PAR	receiving at laboratory	Date of
3804.67	3925.03	3678.20	3706.60		R.R. Quantity (Mt)	
09-06-2023 3804.67 162003990	162008705	162008686	142000762		R.R.No./ F. Note No.	Railway Rake/MGR *
06-06-2023	02-06-2023	27-05-2023	16-05-2023		R.R. Date	WGR *
12.9	11.6	12.9	14.4		TM%	

ustomer Provided Information

Note

(i) Sample collected as per FSA.

(ii) Testing Method followed - Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2013

(iii) None of the experiment is performed by external service provider.

(iv) This report should not be replicated or reproduced.

(v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

A STATE OF THE PARTY OF THE PAR

(Dr. M. K. Saini)
[Authorized Signatory)
CSIR-CIMFR, RC, RANCHI

131 MAC: 00:60:0C:85:11:A1 Sample ID: T-5971 Date: Fri Jul 7 16:37:10 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: Initial Temp: 29,7532 EE Value: 943,483 Jacket Temp: 30.0497 Temp, Rise: 5.4017 Weight: 0.4948 Spike Weight: 0.5013 Fuse: 50.0000 Acid: 8,0000 Sulfur: 0.2800 Units Multiplier: **Gross Heat:** 3775.07 Units: cal/q

Sheela 7/7/23

SAM'S

MCL 1 BOCM - 7 | 05 - 2023 | NPUTA 12 (2) / 12-14

49107/2

132 Instrument MAC:

00:60:0C:85:11:94

Sample ID: T-7417

Date:

Wed Jul 5 11:31:22 2023

Method:

Dynamic

Type:

Mode:

Determination

Bomb ID:

Final

Initial Temp: Jacket Temp:

30.0592 29.9995

EE Value: Temp, Rise:

Spike Weight:

933.403 3.9843

Weight: Fuse:

Units Multiplier:

0.9980 50,0000

1

0.0000 8.0000

Sulfur:

0.6200

Gross Heat:

3654.38

Units:

Acid:

cal/q Scha 3 5 1 23 Sothing

MCL/BOCM-7/5/2023/NPGA14(4)/9-14

41010

133 MAC: 00:60:0C:85:14:4E Sample ID: T-8595 Date: Mon Jul 10 07:48:49 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: Initial Temp: 29.9237 EE Value: 938.620 Jacket Temp: 29,9983 Temp. Rise: 5.2287 Weight: 0.4993 Spike Weight: 0.5052 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.2800Units Multiplier: Gross Heat: 1 3313.73 Units: cal/g

MCL 180cm-6/06/2023/NPGADILL)/614

1410717

Suchi 23

134 Instrument MAC: D0:60:0C:85:11:94 Sample ID: T-8680 Date: Mon Jul 10 12:21:04 2023 Method: Dynamic Type: Final Mode: Determination Bomb ID: Initial Temp: 30.1275 EE Value: 945,700 Jacket Temp: 30.0538 Temp. Rise: 5.0962 Weight: 0.9950 Spike Weight: 0.0000 Fuse: 50.0000 Acid: 8.0000 Sulfur: 0.2900 Units Multiplier: 1 Gross Heat: 4778.86

Units:

Neha 1017/23

cal/g

Mar 130cm-3/06/2023/NPCA 02(1)/010

1510717



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 12.06.2023 TO 15.06.2023

LOADING END ANALYSIS REPORT

Test Report No.-CIMFR/RNC/TPS/NPGA/JUNE/2023/08 Name of Coal Company- Mahanadi Coal Field Ltd. Loading Area / Siding : IR Area - Locks

Power Utility-NTPC-JV NSTPS

Date of start of analysis - 17.07.2023

Relative Humidity of laboratory:

Date:24-07-2023

COACH	R want stand : 19 Was FOCM	-	Product tested -	Coal Sample					Temperatur	e of laboratory			26.3°C	
SI.		Date of	D	Date of		Railway Rake/MG	R+	,	Air-dried ba	isis	50000	ated moist 0% RH & 4		8597B 78
No.	Sample ID	collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	м%	ASH %	GCV (kcal/kg)	M%	A5H%	GCV (kcal/kg)	Analysed Grade **
1	MCL/LOCM-1/06/2023/NPGA06[L]/G-14	12-06-2023	14-06-2023	17-06-2023	3781.17	162003975	12-06-2023	5.8	42.6	3578.03	6.6	42.2	3548	G13
2	MCL/LOCM-3/06/2023/NPGA03(L)/G-14	13-06-2023	15-06-2023	18-06-2023	3859.12	162004252	14-06-2023	6,0	45.8	3330.08	6.8	45.4	3302	614
3	MCL/LOCM-1/06/2023/NPGA07(L)/G-14	15-06-2023	16-06-2023	18-06-2023	4010.74	162003985	16-06-2023	5.9	44.2	3449.44	6.4	44.0	3431	G13

Oustomer Provided Information

(ii) Testing Method followed - Ash & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Part-I): 1984 Restfirmed 2013

[iii]Sulphur(s) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4239-18).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

Dr. M. K. Saini (Authorized Signatory) CSIR-CIMFR, RC, RANCHI

^{**}Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades) Nobe:

⁽I) Sample collected as per PSA.



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 12.06.2023 TO 15.06.2023

LOADING END ANALYSIS REPORT FOR TOTAL MOISTURE

Test Report No.-CIMFR/RNC/TPS/NPGA/JUNE/2023/08

Name of Coal Company- Mahanadi Coal Field Ltd.

Loading Area/ Siding : IB Area- LOCM

Power Utility-NTPC-JV NSTPS

Date of start of analysis - 17.07.2023

Product tested - Coal Sample

Date :24-07-2023

61			2.02	Date of		Railway Rake/MG	R *	
SI. No.	Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note Na.	R.R. Date	TM%
1	MCL/LOCM-1/06/2023/NPGA06(L)/G-14	12-06-2023	14-06-2023	17-06-2023	3781.17	162003975	12-06-2023	12.6
2	MCL/LOCM-3/06/2023/NPGA03(L)/G-14	13-06-2023	15-06-2023	18-06-2023	3859.12	162004252	14-06-2023	12.3
3	MCL/LOCM-1/06/2023/NPGA07(L)/G-14	15-06-2023	16-06-2023	18-06-2023	4010.74	162003985	16-06-2023	13.0

^{*} Customer Provided Information

Note

- (i) Sample collected as per FSA.
- (ii) Testing Method followed Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2013
- (iii) None of the experiment is performed by external service provider.
- (iv) This report should not be replicated or reproduced.
- (v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.



(Dr. M. K. Saini)

(Authorized Signatory)

CSIR-CIMFR, RC, RANCHI

		Inscrument MAC:	00:60	:0C:85:11:94
Sample ID:	T-9973	Date:	Mon Jul 17 1	5:25:00 2023
Method:	Dynamic	Type:		Final
Mode:	Determination	Bomb ID:		1
Initial Temp:	30.0181	EE Value:		939.618
Jacket Temp:	29.9965	Temp. Rise:	92	3.8748
Weight:	0.9954	Spike Weight:		0.0000
Fuse:	50.0000	Acid:	806	8.0000
Sulfur:	0.9500			
Units Multiplier:	1	Gross Heat:		3578.03
		Units:		cal/g

N34874 13/03/23

CENT

MCL (LOCM-1/06-2023/NPMA06 (L)) m-14

FILOSPA

Sample ID: Method: Mode: Initial Temp: Jacket Temp: Weight: Fuse: Sulfan:	T-10075 Dynamic Determination 29,4807 29,9363 0,4969 50,0000	Instrument MAC: Date; Type: Bomb ID: EE Value: Temp. Rise: Spike Weight: Acid:	Tue Jul 18 08:17:42 2023 Final 1 938.620 5.2224 0.5038
Sulfur;	0.5300	residi.	8.0000
Units Multiplier:	i	Gross Heat: Units:	3330.08

Suchi (8.7.23)

MCL/ LOCM-3/06-2023/ NPMA03(L)/1-14

15/10/12 C/10/12

Sample ID: Method: Mode: Initial Temp: Jacket Temp: Weight:	T-10074 Dynamic Determination 29.7313 29.9406 0.9945	Instrument MAC: Date: Type: Bomb ID: EE Value: Temp. Rise:	00:60:00 Tue Jul 18 08:0	Final 1 938.620 3.7288
Fuse: Sulfur:	50.0000 0.5100	Arids	8 ⁶ 71	0.0000 8.0000
Units Multiplier:	1	Gross Heat: Units:		3449.44 cal/n

Suelin Jab

MCL | LOCM-1/06-2023 | NPUIA07 (2) / U-14

सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)

बरवा रोह, पनबार - 826 015, झारखण्ड, भारत

एक अर्ह एस ओ १००१ प्रमणित संस्थान

CSIR-Central Institute of Mining and Fuel Research

(Council of Scientific and industrial Research)
Barwa Road, Dhanbad - 826015, Jharkhend, India
An ISO 9001 Certified Institute





Date of issue: 16.05.2023

LOADING END ANALYSIS REPORT

Test Report No. - CIMFR/DHN/TPS/LD/MAY/23-24/5717 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-BINA, BINA SILO

Name of Power Unity-NTPC, NABINAGAR (NTPC, VINDHYACHAL) Duration of Performance of Analysis: 10.05.2023 to 15.05.2023

> Relative Humidity of laboratory (%): 52.0 Temperature of laboratory (%): 23.5

	8				10	abway Halod M	GR .		Air-dried by	nik:	Equilibrate	diministrace RHA enco		0.0262
*	0			Dose of sample	RR	RRNet				3300			Jane 1	Analysed Grade
Si. No.	Sungile ID	Date of collection	Date of greparation	interiving at laboratory		F. Note No.	R.R. Dek	MIN	ASH%	OCV O(mfkg)	Mts	ASHM	OCV (Knoby)	
1	TPS/L448	92,84,2823	103.04,2023	04,04,2023	- 1000	603377		4.6	31.3	4830.11	6.5	30.7	4734	G9.

Note

(i) Sample collected as per FSA:

(ii) Ash,& Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(Signature and Designation of Authorized Signatory)

हो। अहांक कृता किए / Dr. Ashek Kr. Singh Supe septem mp, times पुरावण उत्तरका ferry / HORG, ROA Division & Project Leader की। एक आई। आन्- केन्द्रीय प्रायम को देवर अनुस्थान संस्थान CSIR-Central Institute Of Mining & Fuel Research Govt, Of India, Dhanbad P.O. F.R.I., PIN-828108, Jharkhand

-trid of Report.

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Date of issue: 16.05,2023

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/I.D/MAY/23-24/5717 B Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding- BINA, BINA SILO Name of Preser Unitity- NTPC, NABINAGAR (NTPC, VINDHYACHAL)

		1	, Sa	Iway Raka M	GR.	
Sl. No	Sample III	Date of collection	RR Quantity (Mg)	R.R.No./ F. Note No.	R.R. Due	Yand Moistan %
1	TPS/L448	02.04.1023		003377		14.2

Note:

(i) Sample cullected as per FSA.

(ii) Total Moisture as per IS 1350 (Part-I), 1984 Reuffirmed 2019

(iii) None of the experiment is performed by external service provider.

(iv) This report should not be replicated or reproduced.

(Signature and Designation of Authorized Signatory

the action were fee / Dr. Ashola Kr. Singh sup appearing, these years arose from / HORG, RQA Division & Project Leader हों। साथ आई: आहः: बलोर छात्र हर्व हेंदन अनुसंदान संस्थान CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanbar P.O.- F.R.L. PIN-828108, Jharkhand

... find of Report....

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E-mail: director@cimfr.nic.in, Digwadih Campus 🕿 +91-326-2381111

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Ranchi: # +91-651-2461392 Borkee: # +9101332-275998

Website: www.cimfr.nic.in

Jacket Temp

Initial Temp:

Parr
6400
Cal
orin
6400Calorimeter

Sample

Method:

Mode:

Fuse: Weight:

Sulfur:

いいのは

MAC: Instrument

Date:

00:60:0C:85:14:40

Mon May 15 22:05:47

2023

Final

Type:

Dynamic

TPS-RQA-448

Bomb ID:

Determination

29.4825

29,9928

Temp. Rise:

Spike Weight:

50.0000

0.5200

Acid:

Units:

S R-04-448

記事などであ

EE Value:

0.0000 0.0000

8.0000

919.715

0.8054

Gross Heat:

4830.11

cal/g

Temp

सीएसआईआर-केन्द्रीय खनन एवं अनसंघान संस्थान (वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)

एक अर्ह एस ओ १००१ प्रमाणित संस्थान

143 CSIR-Central Institute of Mining and Fuel Research

(Council of Scientific and Industrial Research) Barwa Road, Chanbad - 826015, Jharkhand, India An ISO 9001 Certified Institute



वरवा रोह, धनवाड - 826 015, झारहरूह, भारत

Date of issue: 10.06.2023

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/LD/JUN/23-24/6593 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding- DUDHICHUA, DUDHICHUA SILO Name of Power Utility- NTPC, NABINAGAR (NTPC, VINDHYACHAL) Duration of Performance of Analysis: 30.05.2023 to 09.06.2023

Relative Humidity of laboratory (%): 52.0

SL No	Sample ID	Base of collection	Date of preparation	Dute of comple receiving at Inheratory	Railway Raise/ MGR			Air-dried basis			Equilibrated moisture basis (60% RH & 40°C)			Acatrsel
					RR Quantity (MI)	R.R.Na./ F. Note Na.	K.K. Date	MS	ASH%	GCV (Kroling)	MN	ASH%	GCV (Kralleg)	Grade
1	TPS/L2955	2004 2025	21.04.2623	27.04.2023		008524		5.3	25.5	5268,78	7.5	24.9	5146	G8
2	TPS/L2960	21,04,2023	12.14.2523	27.04.2023		008529		5.1	25.1	5203.75	7.1	24.6	5094	G8
3	TPS/L2968	23,04,2023	24,84,2623	27.04.2023		008547		6.2	24.6	5248.69	7.2	24.3	5193	G8
4	TPS/L2976	25,04,2023	26,04,2023	27.64.2023		008613		7.1	30.6	4696.91	7.8	30,4	4662	G9

Note:

(i) Sample collected as per FSA.

(ii) Ash,& Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(Signature and Designation of Authorized Signatory)

the units you fire / Dr. Ashok Kr. Singh अपूर्ण अनुसंधान अपूर, समाध्य पुरावमा आध्याम कियात / HORG, RQA Division & Project Leader भीर पुरुत आहेर आरं- केलीन सक्त एवं ऐसा अनुसारण सामाज CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanbad

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Research Centres: Bilaspur: \$\mathbf{B}\$ +91-775-2271450, Nagpur Unit I - \$\mathbf{B}\$ +91-712-2510604, Unit - II - \$\mathbf{B}\$ 2510390

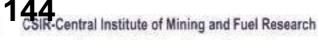
Ranchi: 2 +91-651-2461392 Roorkee: 2 +9101332-275998

Website: www.cimfr.nic.in



सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान

|वैद्यानिक तथा औद्योगिक अनुमधान परिषद्| बरवा रोड, यनबाद - 826 015, जारखण्ड, मारत एक अष्टे एम औ 9001 प्रमणित संस्थान



(Council of Scientific and Industrial Research)
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Date of issue : 10.06.2023

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/LD/JUN/23-24/6593 B
Name of Coal Company-NORTHERN COALFIELDS LIMITED
Loading Area/Siding- DUDITCHUA, DUDHICHUA SILO
Name of Fower Utility- NTPC, NABINAGAR (NTPC, VINDHYACHAL)

SI. Na		Date of sallection				
	Sample ID		RR Quantity (Mi)	R.R.Na.: P. Note No.	R.R. Deix	Total Maistare %
1	TPS/L2955	20.04.2023		008524		14.3
2	TPS/1.2960	21.04.2023		008529		15.2
3	TPS/L2968	23.04.2023		008547		15,0
4	TPS/L2976	28.04.2023		008613		15.2

Note:

- (i) Sample collected as per FSA.
- (ii) Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019
- (iii) None of the experiment is performed by external service provider,
- (iv) This report should not be replicated or reproduced,

(Signature and Designation of Authorized Signatory)

पीर आहेत कुमर निष्: / Dr. Ashok Kr. Singh अपूर्क अनुमेशन सन्त्र, सम्बद्धन कुमरना अध्यक्षन निष्ठण / HORG, RQA Division & Project Leader भीर एक आहे. आहे. नेपनीय सन्तर को हीता अनुमेशन संस्थाय CSIR-Central Institute Of Mining & Fuel Research

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Research Centres : Bilaspur : 2 +91-775-2271450, Nagpur Unit I - 2 +91-712-2510604, Unit - II - 2 2510390

Website: www.cimfr.nic.in

Sample ID Selection

Filter By Run Status:	Filter By Run Type:	Select Sample ID		
O Any Status O Final & Preliminary O Final Only O Preliminary Only O Preweigh Only	Any Type Determination Standardization	RQA-DC-L2955 RQA-DC-L2956 RQA-DC-L2957 RQA-DC-L2958 RQA-DC-L2959 RQA-DC-L609	^ ==	
Note: Preweigh forces type to Al	RQA-DC-L610 RQA-DC-L611	~		

		Instrument MAC	00:60:0C:85:14:53		
Sample ID:	RQA-DC-L2955	Date:	Wed May 31 07;43:18 2023		
Method:	Dynamic	Type:	Final		
Mode:	Determination	Bomb ID:	4		
Initial Temp:	29.6163	EE Value:	960.844		
Jacket Temp:	29.9786	Temp. Rise:	4.4671		
Weight:	0.8022	Spike Weight:	0.0000		
Fuse:	50,0000	Acid:	8.0000		
Sulfur:	0.4200	67054	0.000		

Gross Heat: 5268.78 V Units: cal/g



Units Multiplier:

Eller By Con Chatres	Ellton Bu Bus Tussy	Select Sample ID		
Any Status Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to A	Filter By Run Type: Any Type Determination Standardization	RQA-DC-L2960 RQA-DC-L2961 RQA-DC-L2962 RQA-DC-L2963 RQA-DC-L2964 RQA-DC-L3079 RQA-DC-L609 RQA-DC-L610	^ III	

		Instrument MAC	: 00:60:0C:85:14:53
Sample ID:	RQA-DC-L2960	Date:	Wed May 31 08:46:41 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	4
Initial Temp:	29.2975	EE Value:	960.844
Jacket Temp:	29,9610	Temp. Rise:	4.4340
Weight:	0.8060	Spike Weight:	0.0000
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.4500		
Units Multiplier:	1	Gross Heat:	5203.75
		Units:	cal/g
			-1-

Filter By Run Status:

O Any Status

O Final & Preliminary

Final Only

Sulfur:

Units Multiplier:

O Preliminary Only
O Preweigh Only

Nate: Preweigh forces type to ANY

Filter By Run Type:

O Any Type

Determination

O Standardization

Select Sample ID

BEN-2

BEN-27-2-23

BEN-3

PBC-MP-2367

PBC-MP-2368

PBC-MP-2369

PBC-MP-2370

00:60:0C:85:13:28 Instrument MAC: Wed May 31 07:56:31 2023 Date: RQA-DC-L2968. Sample ID: Final Type: Dynamic Method: Bomb ID: Determination Mode: 943.074 EE Value: 29.7981 Initial Temp: 4.5327 Temp. Rise: 29.9681 Jacket Temp: 0.0000 Spike Weight: 0.8019 Weight: 8.0000 Acid: 50.0000 Fuse:

0.4300

1

Gross Heat: 5248.69

Units: cal/g

Padato

Filter By Run Status:	Fill
O Any Status	0
O Final & Preliminary	•
Final Only	0
O Preliminary Only	
O Preweigh Only	
Makes Decursial forcing hims to ANY	

Filter By Run Type:
O Any Type
 Determination
O Standardization

В	- 18
BEN-2	111
BEN-27-2-23	
BEN-3	
PBC-MP-2367	
PBC-MP-2368	
PBC-MP-2369	
PBC-MP-2370	39

		Instrument MAC	00:60:0C:85:13:28
Sample ID:	RQA-DC-L2976	Date:	Wed May 31 09:09:47 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.8854	EE Value:	943.074
Jacket Temp:	29.9831	Temp. Rise:	4.0872
Weight:	0.8063	Spike Weight:	0.0000
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.5200		
Units Multiplier:	1	Gross Heat:	4696.91
		Units:	cal/g

सीएसआईआ बाव

सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान

(वैज्ञानिक तथा ओडांगिक अनुसंधान परिषद) बरवा रोड, धनवाद - 826 015, झारखण्ड, चारत एक अर्ड एस ओ 9001 प्रमानित संस्थान 149 CSIR-Central Institute of Mining and Fuel Research (Council of Scientific and Industrial Research) Barwa Road, Dharbad - 829015, Jharkhand, India An ISO 9001 Certified Institute





Date of issue: 08.02.2024

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA)
ULR No.-TC-104352300020522F
LOADING END ANALYSIS REPORT
Tost Report No.-CIMER/DEN/TPS/LD/FEB/23-24/20522 A
Same of Coal Company-NORTHERN COALFIELDS LIMITED
Loading Area/Siding - NUBHICHUA, DUDHICHUA WHARFWALL.
Name of Power Utility-NTPC, NABINAGAR (NTPC, VINDHYACHAL)
Duration of Performance of Analysis: 02.02.2024 to 07.02.3024
Test Material: COAL

Relative Humidity of laboratory(%): 52.0 Temperature of laboratory(%): 22.5

					Balant Role WCH			Airdina	usta		19 101 & A		Anabyol				
	- 1	1 1	Basel		Basel	M and	Disc of sample		BERNE	14			1		- 2 DAMOOC	3/4	Grade
51.50	Sample ID	Sception:	Date of gregorialism	receiving at helecorber	RR Quarter (No.	F. Note No.	R.R. Date	44	ASITS	(Krafte)	Hh	ASIES	(KolAp)				
1	TPS/L20016	14.09.2023	26,69,2023	26,19,2023		2000073		6.5	27.5	5069,46	8.0	27.1	1985	G8			

Note:

(i) Sample softened as per FSA by CSIR-CIMFR

(ii) Ash , Monature (air-dried) as per ASTM D 7882-15

- (III) Equilibrated Moisture (60% RH & 4FC) as per IS 1550 (Part-1), 1484 Reafferned 2015
- (iii) Gress calorific value (GCV; air-dried) as per ASTM D 5865-19
- (iv) Name of the experiment is performed by external service provider

(v) This report should not be replicated or reproduced

(Signature of Authorized Signatury)

els que este ano- units uns el fan ambar more CSIR-Central Institute Of Mining & Fuel Research Gove. Of India, Disarbed

P.O.- F.R.L., PIN-828168, Jharkhand

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E-mail: director@cimfr.nic.in, Digwadih Campus 2 +91-326-2381111

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(वैद्यमिक तथा जीवांगिक जन्तव्यन परिषद) बरबा रोह, जनबाद - 826 015, झारखण्ड, भारत एक आई एम ओ १००१ प्रमाणित मंख्यान

सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान 1500-Central Institute of Mining and Fuel Research

(Council of Scientific and Industrial Research) Barwa Road, Dhanbad - 826015, Jharkhand, Indie. An ISO 9001 Cordified Institute



Date of issue: 68.02.2024

TEST REPORT

LAB NAME: Coal Chameterisation Lab. (RQA) LOADING END ANALYSIS REPORT Test Report No.- CIMER/DHN/TPS/LD/FER/23-24/20522 B Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Saling- DUDHICHUA, DUDHICHUA WHARFWALL Name of Power Utility- VTPC, NABINAGAR (NTPC, VINDHYACHAL) Test Material: COAL

			- 8	alivas Bake NG	н	
96.Ne		Seco	Rit. Uponetis (Mi)	R.H.No.2		Total Molence %
	Saugh (0)	Sumpling (Cable hard		F. Netc No. R.I	RR Bur	
1	TPS/1.20016	14,09,2023		2000073		18.9

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Total Moisture as per IS 1350 (Pari-I), 1984 Reaffirmed 2013

(iii) Name of the experiment is purformed by external service provider

(iv) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

कोर दूसर अर्थार आहर-वेटरीय द्वारण हर्ष होगर अनुसर्थन सर्वास CSIR-Central Testitore Of Mining & Fuel Research Govt. Of India. Dhanhad P.O.- F.R.L., PIN-628108, Jharkhard

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E-mail : director@cimfr.nic.in, Digwadih Campus 2 +91-326-2381111

Research Centres : Bilaspur : 🕿 +91-775-2271450, Nagpur Unit I - 🕿 +91-712-2510604, Unit - II - 🕿 2510390

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Filter By Run Status:
O Any Status
O Final & Preliminary
Final Only
O Preliminary Only
O Preweigh Only
Note: Preweigh forces type to ANY

Filter By	Run Type:
O Any Ty	/ре
Determent	mination
O Stand	ardization

Select Sample ID	
RQA-DC-L20012	*
RQA-DC-L20013	-
RQA-DC-L20014	
RQA-DC-L20015	166
RQA-DC-L20016	38
RQA-DC-L20017.	
RQA-DC-L20018.	
ROA-DC-L20019.	

		Instrument MAC:	00:60:0C:81:0B:48
Sample ID:	RQA-DC-L20016	Date:	Tue Feb 6 23:37:16 2024
Method:	Dynamic	Туре:	Final
Mode:	Determination	Bomb ID:	- 2
Initial Temp:	29.7675	EE Value:	941.729
Jacket Temp:	29.9726	Temp. Rise:	4.3860
Weight:	0.8014	Spike Weight:	0.0000
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.5400		
Units Multiplier:	1	Gross Heat:	5069.46
Office (Totalpher)		Units:	cal/g



सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान **52**R-Central Institute of Mining and Fuel Research

(वेतानिक तथा ओद्योगिक अनुमध्यन परिषद्) बरवा रीड, धनबाट - 826 015 आरक्षण्ड, भरत एक अक्षे एम ओ 9001 प्रमणित संस्थान



(Council of Scientific and Industrial Research) Berwe Road, Dhanbad - 826015, Jharkhand, India An ISO 9001 Certified Inhitute



TEST REPORT

TC-10435

Date of issue: 30.10.2023

LAB NAME: Coal Characterisation Lab. (RQA):
ULR No.-TC-104352300015865F
UNLOADING END ANALYSIS REPORT
Test Report No.- CIMFR/DEIN/TPS/UNLD/OCT/23-24/15865 A
Name of Coal Company- NORTHERN COALFIELDS LIMITED
Loading Area/Siding: JNCS
Name of Power Utility- NABINAGAR POWER GENERATION COMPANY
Duration of Performance of Analysis: 25.10.2023 to 28.10.2023

Relative Hamidity of laboratory(%): 52.0 Temperature of laboratory(%): 22.5

Equilibrated massage basis (90% RH & 40°C) Air dried basis Hilbert Hole: MCR Analysis Date of Date of carrier 张张 格山 Grade BUG GEV GCV receiving at F. Nate Na. 54. No Samuele 10 (Collection) proparation laborators Otto ASHS Kmikg (Real/kg) 39.2 3983.64 G11 161000127 13,07,2023 24,07,2023 25,07,1020 1 TPS/U15406

Neter

Test Material: COAL

- (i) Sample collected as per FSA by CSIR-CIMER
- (iii) Ash , Moisture (air-dried) as per ASTM D 7552-15
- (iii) Equilibrated Muisture (60% RH & 60°C) as per 18 1350 (Part-I), 1984 Reaffirmed 2019
- (iii) Gross calorific value (GCV; air-dried) as per ASTM D 5865-19
- (iv). None of the experiment is performed by external service provider
- (v) This report should not be replicated or reproduced

Ald 10.10.22

(Signature of Authorized Signatory

the tree args area befor tree to the aspense near CSIR-Contral Institute Of Mining & Fool Research Govt, Of India, Dissalted P.O. F.R.L. PIN-528108, Jharkhand

Lad of Report.

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सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान रिSiK-Central Institute of Mining and Fuel Research

(वैद्यानिक तथा औद्योगिक अनुमंद्यन परिषद) बरक रोड, बनका - 828 015, झारखन्द, भारत एक अर्छ एम ओ १००१ प्रमाणित मंस्थान



(Council of Scientific and Industrial Research) Barwa Road, Dhanbad - 828015, Jharkhand, India An ISO 9001 Certified Institute



TEST REPORT

Date of issue: 30.10,2023

LAB NAME: Coal Characterisation Lab. (RQA)

ULR No.-TC-104352300015866F

ENLOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15866 A Name of Coal Company- CENTRAL COALFIELDS LIMITED

Loading Area/Siding: CPCS

Name of Power Utility- NABINAGAR POWER GENERATION COMPANY

Duration of Performance of Analysis: 25.10,2023 to 28.10.2023

Test Material: COAL

Relative Humidity of Inhoratory(%): 52.0

Temperature of laboratory("C): 22.5

	W 10	7. V	77 V	7 V	77 V				Ballery Hake MCF		Š	Air-Erice I	e in	maran -	relational RH & 40%	made (GP%)	Analysed
St. No.	Sample 10	Date of Sampling (Collection)	Dute of preparation	Date of sample receiving at laboratory	RR Quanto (Mo	R.R.No. F. Nato Na.	R.H. Dak	ич	ASHSC	GCV (Kmi/kg)	874	A58%	GCV (Noshing)	Grade			
1	TPS/L15409	13,07,2023	19,07,2023	25,01,2023		162000414	Emissis	2.7	49.1	3600.39	2.6	49.2	3664	G13			

Notes

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Ash, Meisture (air-dried) as par ASTM D 7582-15

(iii) Equilibrated Moisture (60% RH & 40°C) as per 18 1350 (Part-I), 1984 Restfirmed 2019.

New of Export.

(iii) Gross catorific value (GCV; air-dried) as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider

(v) This report should not be replicated or reproduced

(Signature of Authorized Signatory

ग्रीत हातः राष्ट्रेत अल्ड- केन्द्रीय करन एवं क्रिया अनुगामार सरकान CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanked P.O. F.R.L., PIN-828108, Jharkhard

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सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान 154. Central Institute of Mining and Fuel Research

(वैज्ञानिक तथा अंद्रोगिक अनुसंधान परिषद) बरवा गेंड, धनबाद - 826 015, झारखण्ड, भारत एक अर्ड एम ओ १००१ प्रमाणित संस्थान

(Council of Scientific and Industrial Research) Barwa Road, Dhanbad - 826015, Jharkhand, India.

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Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA) UNLOADING END ANALYSIS REPORT Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15866 B Name of Coal Company- CENTRAL COALFIELDS LIMITED Loading Area/Siding: CPCS

Name of Power Utility- NABINAGAR POWER GENERATION COMPANY

Test Material: COAL

			н			
51. Na	Sample 10	Date of Sampling, (Collection)	RR Quantity (Mi)	BUK Nov F. Note No.	R.R. Date	Total Maletory %
1	TPS/U15409	13.07.2023		162000416	25	13.8

(i) Sample collected as per FSA by CSIR-CIMFR:

(ii) Total Moieture as per IS 1350 (Part-4), 1584 Reaffirmed 2019

(iii) None of the experiment is performed by external service provider

(iv) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

तीर पुरस्त बाईट अल्डन केलीन करन वर्ष क्षेत्र अनुसार तीवान CS/R-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanhad P.O. F.R.L. PIN-828108, Ibarkhand

Ind of Report.

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Ranchi: * +91-651-24613945 Toorkee: * +9101332-275998

		Select Sample ID)
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to All	Filter By Run Type: Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	

		THE RESERVE AND ADDRESS OF THE PARTY OF THE PARTY.	
Sample ID:	RQA-DC-U15409	Date:	Fri Oct 27 08:04:26 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.6435	EE Value:	928.599
Jacket Temp:	29,9670	Temp. Rise:	5.2000
Weight:	0.6058	Spike Weight:	0.4033
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.3700		
Units Multiplier:	1	Gross Heat:	3660.39
Office Francipilor		Units:	cal/g

Instrument MAC:

00:60:0C:85:14:53



सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान CSIR-Central Institute of Mining and Fuel Research

(वेतानिक तथा ओदांगिक अनुसंघान परिचर) बरवा तीड, धनबार - 826 015, हारखण्ड, भारत एक आई एम ओ 9201 प्रमाणित संस्थान



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Barwa Road Dhanbad - 826015, Jharkhand, India
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TEST REPORT

Date of issue: 30.10.2023

LAB NAME: Coal Characterisation Lab. (RQA)

ULR No.-TC-104352300015868F

UNLOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15868 A Name of Coal Company- CENTRAL COALFIELDS LIMITED

Loading Area/Siding: CCSR

Name of Power Utility- NABINAGAR POWER GENERATION COMPANY

Duration of Performance of Analysis: 25.10.2023 to 28.10.2023

Test Material: COAL

Relative Humidity of laboratory(%): 52.6 Temperature of laboratory(%): 22.5

					Saffway Stakes MGR			Air-shried hases			Equilibrated reciseure basis (60%) RELA HPC)			Andred
SL No	Sample ID	Date of Sampling (Colorise)	Date of proporation	Description of sample receiving as falsernings	RR Quintity (Mt)	R.R.Na.) F. Nate No.	R.R. Date	MS	ASH%	GCV (Korifee)	3104	ASIPS	GCV (Kralikg)	Grade
1	resousur	13,07,2023	19.07.2023	25.07.2003		161001467		6,5	34.0	4403,98	6.1	34.1	4423	G10
2	TPS/U15428	16.07.2023	20.07,2023	25/07/2023		161001468		7.4	35.6	4158.01	6.7	35.9	4230	GII

Nate

- (i) Sample collected as per USA by CSIR-CIMPR
- Ash., Moisture (air-dried) as per ASTM D 7582-15
 Equilibrated Muisture (60% RH & 40°C) as per IS 1350 (Part-I), 1984 Reaffirmed 2019
- (iii) Gross calcetific value (GCV; air-dried) as per ASTM D 5865-19
- (iv) None of the experiment is performed by external service provider
- (v) This report should not be replicated or reproduced

Ald 140.22

(Signature of Authorized Signatory)

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सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान

CSIR-Central Institute of Mining and Fuel Research

(Council of Scientific and Industrial Research) Barwa Road Dhanbad - 826015, Lharkhand, India An ISO 9001 Certified Institute



वैद्यानिक तथा ओग्रांगिक अनुसंधान परिषद! बरवा गीत, धनबाद - 826, 015, हारखण्ड, भारत एक आई एम ओ २२०१ प्रमाणित संस्थान

Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA) UNLOADING END ANALYSIS REPORT Test Report No.- CIMER/DHN/TPS/UNLD/OCT/23-24/15868 B Name of Coal Company- CENTRAL COALFIELDS LIMITED Loading Area/Siding: CCSR

Name of Power Utility- NABINAGAR POWER GENERATION COMPANY

Test Material: COAL

				U.		
51. No.	Sample III	Date of Sampling (Collection)	RR Quantity (Mi)	R.R.No./ E. Note No.	R.R. Date	Total Maistany %
1	TPS/E15411	13,07,2023		161001467		15.6
1	TPS/U15428	16,0T,2023		161001468		15.1

Name

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Total Moisture as per 15 1350 (Part-I), 1984 Reaffirmed 2019

(iii) Nane of the experiment is performed by external service provider

(iv) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

हीं: इस- अपूर्व अस- केलीच फल्ट हा होत्व अनुसंबंध मेरिका CSIR-Central Institute Of Mining & Fuel Research Gevt. Of Indio, Dhanbad P.O. F.R.L. PIN-828108, Ilurkhand

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Ranchi: # +91-651-2461392.54borkee: # +9101332-275998

1.255.555.2515.2515.255.455.250	(12.10 P. 10.2 P. 10.2 P. 10.2 P. 10.00)	Select Sample ID	-
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to A	Filter By Run Type: Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	

		Instrument MAC:	00:60:0C:85:14:53	
Sample ID:	RQA-DC-U15411	Date:	Fri Oct 27 08:24:30 2023	
Method:	Dynamic	Type:	Final	
Mode:	Determination	Bomb ID:	1	
Initial Temp:	29.5595	EE Value:	928.599	
Jacket Temp:	29.9566	Temp. Rise:	3.8878	
Weight:	0.8042	Spike Weight:	0.0000	
Fuse:	50.0000	Acid:	8.0000	
Sulfur:	0.5800			
Units Multiplier:	1	Gross Heat:	4403.98	
A TWO VERSE INCOME DE COMPANY		Units:	cal/g	



	42.60 (3.75.20) (22.75) (4.25) (4.75)	Seiect Sample II)
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to Al	Filter By Run Type: O Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	100

		Instrument MAC:	00:60:0C:85:14:53
Sample ID:	RQA-DC-U15428	Date:	Fri Oct 27 11:18:19 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.5430	EE Value:	928,599
Jacket Temp:	29.9217	Temp. Rise:	5.1348
Weight:	0.8075	Spike Weight:	0.2074
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.5400		
Units Multiplier:	1	Gross Heat:	4198.01
			CO. C. T. C. C.

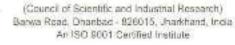
Units:

9359



सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान 160 Central Institute of Mining and Fuel Research

(वैहानिक तथा औद्योगिक अनुसंधान परिषय) वरबा रोह, चनबाद - 826 015, झारखण्ड, भारत एक आई एम जो १००१ प्रमाणित मंख्यात







Date of issue; 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA) ULR No.-TC-104352300015869F UNLOADING END ANALYSIS REPORT Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15869 A Name of Coul Company- NORTHERN COALFIELDS LIMITED Londing Area/Siding: DCSN Name of Power Utility- NABINAGAR POWER GENERATION COMPANY Duration of Performance of Analysis: 25.10,2023 to 28.10.2023 Test Material: COAL

Relative Humidity of laboratory(%): 52.6

Temperature of laboratury (°C): 22.5

								oriens Rube MGI			Aindried I		Equilibra	Had moderate Had to day	c basin (68%) (1)	Addition
SI No	Sample III	Date of Sumplier (Colordon)	Dasc of properation	Date of sample exercising at laboratory	RK Quantity (NG)	P. Nav No.	R.R. Owe	M %	ASH'S.	OCS (Kraffeg)	50%	ASB%	GCV (Keskig)	Grack		
1	TPS/U15413	14.07.2023	19,07,2023	25.07.2023		161014104	0.000	5.9	29.2	4628.75	8.0	29.5	4674	G9		

Notes

- (i) Sample collected as per FSA by CSIR-CIMFR
- (ii) Ash , Muisture (nic-dried) as per ASTM D 7582-15
- (iii) Equilibrated Moisture (60% RH & 40°C) as per IS 1356 (Part-I), 1584 Reaffirmed 2019
- (iii) Gross calerific value (CCV; air-dried) as per ASTM D 5865-19
- (b) None of the experiment is performed by external service provider
- (v) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

भीर पूर्ण आई० अराध- केन्द्रीय समय एवं होंचा अनुसंधान विस्ता CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanbad P.O. F.R.L. PIN-528108, Jharkhand

End of Report

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Ranchi: 2 +91-651-2461392 Goorkee: 2 +9101332-275998



सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान 16SR-Central Institute of Mining and Fuel Research

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्) बस्ता रोड, यनवाद - 826 015, शास्त्रपड, भारत एक आहे एस औ 9001 प्रमाणित संस्थान

(Coundl of Scientific and Industrial Research)
Barwa Road, Dharroad - 825015, Jharkhand, India
An ISO 9001 Certified Institute



Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA)
UNLOADING END ANALYSIS REPORT
Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15869 B
Name of Coal Company- NORTHERN COALFIELDS LIMITED
Loading Arts/Siding: DCSN
Name of Power Utility- NABINAGAR POWER GENERATION COMPANY
Test Material: COAL

				alway Bake MCR	č	U.
5.%	Sneple III	Date of Sampling (Collection)	RR Quality (Mt)	RRNs/ F, Nac Na	R.H. Date	Total Molsture %
1	TPS/UI5413	14.07.2023		161014104	10000	16.2

Name

- (i) Sample collected as per FSA by CSIR-CIMFR
- (ii) Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019
- (iii) None of the experiment is performed by external service provider
- (is) This report should not be replicated or reproduced

ALD 30.10.21

(Signature of Authorized Signatory)

the true and a size. hells that opinion agrees over the CSER-Central Institute Of Mining & Foot Research Govt, Of India, Dhanbad P.O.- F.R.L., PIN-528105, Jhankhand

and of Report.

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E-mail: director@cimfr.nic.in, Digwadlh Campus 2 +91-326-2381111

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Ranchi: 2 +91-651-2461394 Goorkee: 2 +9101332-275998

Filter By Run Status: Filter By Run Type: N-201	Sample ID
O Any Status O Any Type N-202 O Final & Preliminary ● Determination N-203 ● Final Only O Standardization N-204 O Preliminary Only N-205 O Preweigh Only N-205 N-206 N-206 N-207 N-208	

		Instrument MAC:	
Sample ID:	RQA-DC-U15413	Date:	Fri Oct 27 08:44:26 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.5257	EE Value:	928.599
Jacket Temp:	29.9340	Temp. Rise:	4.0770
Weight:	0.8035	Spike Weight:	0.000.0
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.4800		
Units Multiplier:	1	Gross Heat:	4628.75
Onics Prompher		Units:	cal/g



सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान 163. Central Institute of Mining and Fuel Research

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(वैज्ञानिक तथा औदांगिक अनुसंपान परिषद्) बरवा रोह, धनवाद - 826 व्राइ, झारखण्ड, भारत एक आई इस ओ १०३१ प्रमाणित संस्थान



TEST REPORT

Date of issue: 30.10.2023

LAB NAME: Coal Characterisation Lab. (RQA) ULR No.-TC-104352300015870F

UNLOADING END ANALYSIS REPORT Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15870 A Name of Coal Company- MAHANADI COALFIELDS LIMITED

Loading Area/Siding: LOMB

Name of Power Utility- NABINAGAR POWER GENERATION COMPANY

Duration of Performance of Analysis: 25.10.2023 to 28.10.2023

Test Material: COAL

Relative Humility of laboratory(%): 52.0 Temperature of laboratory(°C): 22.5

SL Na	Date of Serveling Date of Collection's programation	Los vivos			ā	Rainer Rain, MCII			Aintriett	min)		od maistan KH & 40°1	r Insula (60%) T	
		Date of sample receiving at laboratory	RR Quantity (Mb)	ILR.No./ T. Nane Na.	R.R. Date	M %	ASU%	GCV (Krakky)	9%	ASSESS.	GCV (Kolky)	Analysol Grade		
1	TPS/U15414	14,07,2028	19.07.2023	25,07,2003		162904264	SUBCCO'S.	8.2	46.7	3041,98	7.1	67.3	3079	GIS

Note:

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Ash , Moisture (air-dried) as per ASTM D 7582-15

(iii) Equilibrated Moisture (60% RH & 40°C) as per IS 1350 (Part-I), 1984 Reaffirmed 2019

(iii) Gross calorific value (GCV; air-dried) as per ASTM D 5865-19

(iv). None of the experiment is performed by external service provider

(v) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

मीठ स्मृत आहेर असर- वेन्द्रीय वानन एवं हिंबन अनुस्थान स्त्यान CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dheabed P.O.- F.R.L. PIN-528105, Jharkhand

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सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान ¹⁶⁴SIR-Central Institute of Mining and Fuel Research

वंद्रानिक तथा जीवंगिक अनुमंद्रान परिषद्। बरवा रोत, बनबाद - 826 ०१५, डारखण्ड, भारत एक आई एम ओ 9001 प्रमाणित मंत्यान

(Council of Scientific and Industrial Research) Banva Road, Dhanbad - 826015, Jhanhand, India An ISO 9001 Certified Institute



Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA) UNLOADING END ANALYSIS REPORT Test Report No. - CIMFR/DHN/TPS/UNLD/OCT/23-24/15870 B Name of Coal Company- MAHANADI COALFIELDS LIMITED Loading Area/Siding: LOMB Name of Power Utility: NABINAGAR POWER GENERATION COMPANY Test Material: COAL

8.%	Sample III	Businer Sampling (Californian)	IKR Quantity (MII)	R.R.Ne./ F. Note No.	R.R. Date	Total Moletare %
1	TPS/UIS04	14,07,2023		162004064	T. A. S. S. S.	15.5

Notes

(i) Sample collected as per FSA by CSIR-CIMFR.

(ii) Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019

(iii) None of the experiment is performed by external service provider

(iv) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

के कार महर बाद- केर्बय कर एवं किए अपूर्वता तवाल CSER-Central Institute Of Mining & Fuel Research Govt, Of India, Dhanbad P.O. F.R.L. PIN-528108, Jharkhand

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Ranchi : 2 +91-651-2461392 Roorkee : 2 +9101332-275998

	12/2016 (2011 Lab. 19 22 18 18 18 18	Select Sample ID	
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to Al	Fliter By Run Type: Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	() ()

		Instrument MAC:	00:60:0C:85:14:53
Sample ID:	RQA-DC-U15414	Date:	Fri Oct 27 08:53:47 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.5398	EE Value:	928.599
Jacket Temp:	29.9224	Temp. Rise:	4.8273
Weight:	0.6052	Spike Weight:	0.4074
Fuse:	50.0000	Acid:	8,0000
Sulfur:	0.6500		
Units Multiplier:	1	Gross Heat:	3042.98
A COLOR OF THE PARTY OF THE PAR			100,000

Units:

Par



सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान 166. Central Institute of Mining and Fuel Research

विज्ञानिक तथा ओव्वांनिक अनुसंधान परिषदा वरवा रोड, घनवाद - 826 015, झारखण्ड, भारत एक आई एस ओ 9201 प्रमाणित संस्थान

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Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA) UNLOADING END ANALYSIS REPORT Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15865 B Name of Coal Company- NORTHERN COALFIELDS LIMITED Loading Area/Siding: JNCS Name of Power Utility- NABINAGAR POWER GENERATION COMPANY Test Material: COAL

				taiway Rober MGR	Ĕ	
SL No	Sample 10	Date of Sumplier (Collection)	RR Quality (Mt)	R.H.Ne.J E. Note No.	R.H. Den	Total Montare Vi
1	TPS/015406	13,07,2923		161000127		14.7

(i) Sample-collected as per FSA by CSIR-CIMFR

(ii) Total Moisture as per 18 1350 (Part-1), 1984 Renffirmed 2019

(iii) None of the experiment is performed by external service provider

(iv) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

को रक्त आई० जरूर- केन्द्रीय खात एवं हेच्य अनुसंदान संस्थान CSIR-Central Institute Of Mining & Fuel Research Govt, Of India, Dhanbad P.O. F.R.L. PIN-828108, Jharkhand

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Ranchi: 2 +91-651-2461392 Coorkee: 2 +9101332-275998

		Select Sample ID	
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to A	Filter By Run Type: Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	Sister Control of the

		Instrument MAC:	
Sample ID:	RQA-DC-U15406	Date:	Thu Oct 26 20:20:32 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.7202	EE Value:	928.599
Jacket Temp:	29.9826	Temp. Rise:	4.9310
Weight:	0.8096	Spike Weight:	0.2036
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.5100		
Units Multiplier:	1	Gross Heat:	3983.64
Office Praicipiters		Units:	cal/g

168



बरवा रोड. धनवाड - 826 ११५, बारखण्ड, मारत एक शहं एवं औ 9001 प्रमणित संस्थान

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Ref No.:- Nil

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Central Institute of Mining and Fuel Research

Test Report Date:- 17.05.2023

Dated:- 13.03.2023

Source: Debasis Banerjee

II/TR/23-24/UT/15

Sr. Manager(Chemistry) NTPC Nabinagar, Aurangabad Bihar

SI	Sample	CIMFR	Supplied		Supplied Analysis (ADB				
	No. Particulars Sample No (As Stated) RQA/2023/T/		000	WAR THE TOWN	Ultimate Analysis				
	Composite	TO DO DO DO LO	(in kg)	(in mm)	N%	C%	Н%	5%	0%
Rake Coal	05	18.0	50.8	0.81	40.88	2.31	0.55	8.85	

Remark: Sampling not done by CIMFR Digwadih Campus.

For Analysis:-

ASTM: D3176, were followed

Note:-In case of samples with more than 40% Ash content, the conventional formula for Oxygen content determination [IS-1350 Part-1] does not follows. In such case the oxygen value can be determined by subtracting the sum of M%, Ash%, C%, H%, S%, and N% from hundred and Oxygen & Hydrogen value are reported as O% (cfm) and H% (cfm). cfm means the value of Hydrogen & Oxygen corrected for only Hydrogen & Oxygen from Moisture but not corrected for Hydrogen & Oxygen from combined water i.e., water of hydration.

प्रमुख, परियोजना प्रबंधन एवं उद्योग संपर्क Head, Project Planning & Industry Interface सी.एस.आई.आर-सी.आई.एम.एफ.आर., डिगवाढीह परिसर CSIR-CIMFR, DIGWADIH CAMPUS

सीएसआईआर-केन्द्रीय खनन एवं ईंधन अनुसंधान संस्थान (वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद) बरवा रोड, धनबाद - 826 015, सारखण्ड, 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/23-24/UT/15

परीक्षण रिपोर्ट Test Report

Central Institute of Mining and Fuel Research
Digwadih Campus, Dhanbad - 828 108
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contracts and can not be produced in a court of law.

REPORT OF ANALYSIS

Date:-11.04.2023

1. Name of Party	Sr. Manager (Chemistry) NS	TPS Nabinagar
2. Letter Reference No. & Date	NIL,	Dated:-13.03.2023
3. Name & No. of Sample	Coal Sample 01 No.	
4. Sampling	As received, Sampling not done by CIMFR	

SI.No.	Sample Details	Sample No.	Name of the Test & Results
			Roga - Index
1,	01 no. of Coal Sample(Composite Rake Coal) of NSTPS- Nabinagar	CRB/01/23-24 RQA/23/T/87	17.64

Method Followed:-

IS 1353: 1993

Frair Marred 12.04.2023

प्रमुख, परियोजना प्रबंधन एवं सद्योग संपर्क Head, Project Planning & Industry Interface ती.श्राई.आर-सी.आई.एम.एफ.आर. विगवाबीह परिसर CSIR-CIMFR, DIGWADIH CAMPUS

170



सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान

(वैद्यानिक तथा औद्योगिक अनुसंवान परिषर्) बरवा रोड. धनवाद - 826 015, आरखण्ड, फारन एक शार्ड एस औ 9001 प्रमाणिन संस्थान CSIR-Central Institute of Mining and Fuel Research

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II/TR/23-24/UT/15

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परीक्षण रिपोर्ट Test Report

Date: - 27.04.2023

Ref No.:- Nil

Dated:- 13.03.2023

Source:- Debusis Banerice

Sr. Manager(Chemistry)

NTPC Nabinagar,

Aurangabad Bihar

SI	Sample	CIMFR	Supp	Supplied		Analysis (ADB)					
No.	Particulars (As Stated)	Sample No RQA/2023/T/	Quantity (in kg)	Size (in mm)	М%	Ash%	VM%	FC%	AI (mg/Kg)	HGI	
1	Composite Rake Coal	87	18.0	50.8	1.7	44.9	21.7	31,7	59.53	53	

Remark:- Sampling not done by CIMFR Digwadih Campus.

For Analysis:-

15: 9949-1986

15: 4433 -1979

ASTM D7582-15

IS: 1350 (PART-1)- 1984 Reaffirmed 2019, Were followed

9 7 02.05·2023

31/20/2013

भारत सरियोजना प्रबंधन एवं उद्योग संपर्क Hadi, Project Planning & Industry Interface भीड्स आई आर-सी.आई.एम.एक.आर., डिगवाबीड परिसर CSIR-CIMFR, DIGWADIH GAMPUS

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

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Reference/Requisition No.:

Date of Analysis:

Report No.:

Instrument Details:

CSIR- Central Institute of Mining and Fuel Research

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II/TR /23-24/UT/15

परीक्षण रिपोर्ट Test Report

CIMFR/XRF/AA/PP/APRIL/03/23 (05/04/2023)

05/04/2023

CIMFR/XRF/AA/APRIL/01/23

ZSX Primus IV WDXRF, Rigaku, Japan

Date: 05.04.2023

Ash Composition Analysis (wt%)

S.NO.	Sample ID	SiO2	Al203	Fe2O3	CaO	MgO	TIO2	K2O	Na20	P205	503	V205	MnO
	RQA/2023/T/87		The second second		Annual Control of the Control	0.66	1.81	1.59	0.05	0.46	0.09	0.06	0.05

Remark

Sampling not done by CIMFR, Digwadih Campus

For Analysis:

Coal CRM

17 Marce प्रमुख, परियोजना प्रबंधन एवं उद्योग संपर्क Head, Project Planning & Industry Interface सी.एस.आई.स्वर-सी.आई.एम.एक.आर., डिगवाडीह परिसर CSIR-CIMFR, DIGWADIH CAMPUS



सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान ⁷²CSIR-Central Institute of Mining and Fuel Research

(वेतानिक तथा ओद्योगिक अनुमध्यन परिषद्) बरवा रीड, धनबाट - 826 015 आरक्षण्ड, भरत एक अष्टे एम ओ 9001 प्रमाणित संस्थान



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TEST REPORT

TC-10435

Date of issue: 30.10.2023

LAB NAME: Coal Characterisation Lab. (RQA)
ULR No.-TC-104352300015865F
UNLOADING END ANALYSIS REPORT
Test Report No.- CIMFR/DEN/TPS/UNLD/OCT/23-24/15865 A
Name of Coal Company- NORTHERN COALFIELDS LIMITED
Loading Area/Siding: JNCS
Name of Power Utility- NABINAGAR POWER GENERATION COMPANY
Duration of Performance of Analysis: 25.10.2023 to 28.10.2023

Relative Hamidity of laboratory(%): 52.0 Temperature of laboratory(%): 22.5

Equilibrated massage basis (90% RH & 40°C) Air dried basis Hilbert Hole: MCR Analysis Date of Date of carrier 张张 格山 Grade BUG GEV GCV receiving at F. Nate Na. 54. No Samuele 10 (Collection) proparation laborators Otto ASHS Kmikg (Real/kg) 39.2 3983.64 G11 161000127 13,07,2023 24,07,2023 25,07,1020 1 TPS/U15406

Neter

Test Material: COAL

- (i) Sample collected as per FSA by CSIR-CIMER
- (ii) Ash , Moisture (air-dried) so per ASTM D 7552-15
- (iii) Equilibrated Muisture (60% RH & 60°C) as per 18 1350 (Part-I), 1984 Reaffirmed 2019

End of Report...

- (iii) Gross calorific value (GCV; air-dried) as per ASTM D 5865-19
- (iv). None of the experiment is performed by external service provider
- (v) This report should not be replicated or reproduced

Ald 30.10.22

(Signature of Authorized Signatory

the tree angle array decits are not the appear mean (SHR-Central Institute Of Mining & Feel Research Govt, Of India, Dissabed P.O., F.R.L., PIN-528108, Jharkhand

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(वैद्यानिक तथा औद्योगिक अनुमंद्यन परिषद)

एक अर्छ एम ओ १००१ प्रमाणित मंस्थान

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Date of issue: 30.10,2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA)

ULR No.-TC-104352300015866F

ENLOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15866 A Name of Coal Company- CENTRAL COALFIELDS LIMITED

Loading Area/Siding: CPCS

Name of Power Utility- NABINAGAR POWER GENERATION COMPANY

Duration of Performance of Analysis: 25.10,2023 to 28.10.2023

Test Material: COAL

Relative Humidity of Inhoratory(%): 52.0 Temperature of laboratory("C): 22.5.

					Railway Rake MCR			Air-drict bern			Equilibrated ministers back (60%) RH & 40°C)			Apabord
Si. No. Sample ID	Sureding Dute of	Date of sample receiving at laboratory	RR Quanto (Mo	R.R.Nor F. Nato Na.	R.H. Daily	ич	ASHSC	GCV (Kmi/kg)	894	A58%	GCV (No.65q)	Grade		
1	TPS/L15409	13,07,2023	19,07,2023	25,01,2023		162000416	20,750.5	2.7	49.1	3690.39	2.6	49.2	3664	G13

Notes

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Ash, Meisture (air-dried) as par ASTM D 7582-15

(iii) Equilibrated Moisture (60% RH & 40°C) as per 18 1350 (Part-I), 1984 Restfirmed 2019.

. New of Export. ...

(iii) Gross catorific value (GCV; air-dried) as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider

(v) This report should not be replicated or reproduced

(Signature of Authorized Signatory

ग्रीत हातः राष्ट्रेत अल्ड- केन्द्रीय करन एवं क्रिया अनुगामार सरकान CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanked P.O. F.R.L., PIN-828108, Jharkhard

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सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान CSIR-Central Institute of Mining and Fuel Research

(वेजनिक तक अंद्रोगिक अनुसंबान परिषद) बरवा गेंड, धनबाद - 826 015, झारखण्ड, भारत एक आई एस ओ १००१ प्रमाणित संप्यान

(Council of Scientific and Industrial Research) Barwa Road, Dhanbad - 826015, Jharkhand, India. An ISO 9001 Certified Institute



Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA) UNLOADING END ANALYSIS REPORT Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15866 B Name of Coal Company- CENTRAL COALFIELDS LIMITED Loading Area/Siding: CPCS Name of Power Utility- NABINAGAR POWER GENERATION COMPANY

Test Material: COAL

			11			
SLNs	Sample 10	Date of Sampling (Collection)	RR Quantity (Mo	SUK Nov F. Nett Ne	R.R. Date	Total Malatare %
1	TPS/U15409	13.07.2023	0	162000416	25	13.8

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Total Moieture as per IS 1350 (Part-4), 1984 Reaffirmed 2019

(iii) None of the experiment is performed by external service provider

(iv) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

तीर पुरस्त बाईट अल्डन केलीन करन वर्ष क्षेत्र अनुसार तीवान CS/R-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanhad P.O. F.R.L. PIN-828108, Ibarkhand

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Ranchi: * +91-651-2461394, Roorkee: * +9101332-275998

	CONTRACTOR OF THE STATE OF	Select Sample ID)
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to A	Filter By Run Type: Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	

Sample ID:	RQA-DC-U15409	Date:	Fri Oct 27 08:04:26 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.6436	EE Value:	928.599
Jacket Temp:	29,9670	Temp. Rise:	5,2000
Weight:	0.6058	Spike Weight:	0.4033
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.3700		
Units Multiplier:	1	Gross Heat:	3660.39
St. Jan X		Units:	cal/g

Instrument MAC:

00:60:0C:85:14:53



सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान CSIR-Central Institute of Mining and Fuel Research

(वेतानिक तथा आंधांगिक अनुसंघन परिचर) बरवा गेंड, धनबाव - 826 015, झरखण्ड, भारत एक आर्थ एम जो 9201 प्रमणित सम्बान



(Council of Scientific and Industrial Research) Sarwa Road, Dhenbad - 826015, Jherkhand, India An ISO 9001 Certified Institute



TEST REPORT

Date of issue: 30.10.2023

LAB NAME: Coal Characterisation Lab. (RQA)

ULR No.-TC-104352300015868F

UNLOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15868 A Name of Coal Company- CENTRAL COALFIELDS LIMITED

Loading Area/Siding: CCSR

Name of Power Utility- NABINAGAR POWER GENERATION COMPANY

Duration of Performance of Analysis: 25.10.2023 to 28.10.2023

Test Material: COAL

Relative Humidity of laboratory(%): 52.6 Temperature of laboratory(%): 22.5

						Rathway Rather MGR		Air-stried hose		Equilibrated molecure basis (60%) RUL & 40°C)			Audred	
3000000	Date of proporation	C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	RR Quintity (Mt)	R.R.Na.) F. Nate No.	R.R. Date	MS	ASH%	GCV (Korifee)	3104	ASIPS	GCV (Kralikg)	Grade		
1	resousur	13,07,2023	19.07.2023	25.07.2003		161001467		6,5	34.0	4403,98	6.1	34.1	4423	G10
2	TPS/U15428	16.07.2023	20.07,2023	25/07/2023		161001468		7.4	35.6	4158.01	6.7	35.9	4230	GII

Nate

- (i) Sample collected as per USA by CSIR-CIMPR
- (iii) Ash , Moisture (air-dried) as per ASTM D 7582-15
- (iii) Equilibrated Moisture (60% RH & 40°C) as per IS 1350 (Part-I), 1984 Reaffirmed 2019
- (iii) Gross calcolfic value (GCV; air-dried) as per ASEM D 5865-19
- (iv) None of the experiment is performed by external service provider
- (v) This report should not be replicated or reproduced

Ald 140.22

(Signature of Authorized Signatory)

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Fed of Report.

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Research Centres: Bilaspur; ☎ +91-775-2271450, Nagpur Unit I - ☎ +91-712-2510604, Unit - II - ☎ 2510390

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सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान

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(Council of Scientific and Industrial Research)
Barwa Road, Dhantad - 826015, Lharkhand, India
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(वैज्ञानिक तथा ओडांगिक अनुसंधान परिषद्) बरवा गोंड, धनवार - 826 015, झारखण्ड, मास्त एक आई एम ओ 9201 प्रमाणित संस्थान

Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA)
UNLOADING END ANALYSIS REPORT
Test Report No.- CIMPR/DHN/TPS/UNLD/OCT/23-24/15868 B
Name of Coal Company- CENTRAL COALFIELDS LIMITED
Loading Area/Siding: CCSR
Name of Power Utility- NABINAGAR POWER GENERATION COMPANY
Test Material: COAL

			- 1	6		
St. No Sample III	Sample III	Date of Sampling (Collection)	RR Quantity (Mi)	R.R.No./ E. Note No.	R.R. Date	Total Maistany %
1	TPS/E15411	13,07,2023		161001467		15.6
1	TPS/UL5428	16,0T,2023		161001468		15.1

Nates

- (i) Sample collected as per FSA by CSIR-CIMFR
- (ii) Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019
- (iii) None of the experiment is performed by external service provider
- (iv) This report should not be replicated or reproduced

ALD 10.22

(Signature of Authorized Signatory)

The year artic artic bedt sack to the appear their CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanbad P.O.- F.R.L., PIN-828168, Huarkhand

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E-mail: director@cimfr.nic.in, Digwadih Campus 2 +91-326-2381111

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Ranchi: 2 +91-651-2461392.74borkee: 2 +9101332-275998

		Select Sample ID	
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to A	Filter By Run Type: Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	× 1

		Instrument MAC:	00:60:0C:85:14:53	
Sample ID:	RQA-DC-U15411	Date:	Fri Oct 27 08:24:30 2023	
Method:	Dynamic	Type:	Final	
Mode:	Determination	Bomb ID:	1	
Initial Temp:	29.5595	EE Value:	928.599	
Jacket Temp:	29.9566	Temp. Rise:	3.8878	
Weight:	0.8042	Spike Weight:	0.0000	
Fuse:	50.0000	Acid:	8.0000	
Sulfur:	0.5800			
Units Multiplier:	1	Gross Heat:	4403.98	
Secretary Control (1987)		Units:	cal/g	



	이 없다. 사람이 사람이 되었다면 보다 하는 것	Select Sample II	
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to Al	Filter By Run Type: O Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	100

		Instrument MAC:	00:60:0C:85:14:53
Sample ID:	RQA-DC-U15428	Date:	Fri Oct 27 11:18:19 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.5430	EE Value:	928,599
Jacket Temp:	29.9217	Temp. Rise:	5.1348
Weight:	0.8075	Spike Weight:	0.2074
Fuse:	50.0000	Acid:	8,0000
Sulfur:	0.5400		
Units Multiplier:	1	Gross Heat:	4198.01
		Units:	cal/g



सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान ¹⁸Sik-Central Institute of Mining and Fuel Research

(वैहारिक तथा औद्योगिक अनुसंबन परिषद) वरबा रोह, चनबाद - 826 015, झारखण्ड, भारत एक आई एम जो १००१ प्रमाणित मंख्यात



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Date of issue; 30.10.2023

TEST REPORT

TC-10435

LAB NAME: Coal Characterisation Lab. (RQA) ULR No.-TC-104352300015869F UNLOADING END ANALYSIS REPORT Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15869 A Name of Coal Company- NORTHERN COALFIELDS LIMITED Londing Area/Siding: DCSN Name of Power Utility- NABINAGAR POWER GENERATION COMPANY Duration of Performance of Analysis: 25,10,2023 to 28,10,2023 Test Material: COAL

Relative Humidity of laboratory(%): 52.6

Temperature of laboratury (°C): 22.5

SI No	Swade ID	Date of Sumpling (Collection)	Dasc of proposition	Date of sample exercises at Tabernate	Reimes Rake MGIL			Air-dried tiefs			Regulationated molecure basis (68% 805 & 48°C)			Andred
					RK Quantity (NG)	RRNs./ F. Nav No.	R.R. Oax	M %	ASH'S	OCT (Kraffeg)	90%	ASBN	GCV (Kestig)	Grade
1	TPS/U15413	14.07.2023	19,07,2023	25.07.2023		161914104	0.000	5.9	29.2	4628.75	8.0	19.5	4674	G9

Notes

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Ash , Muisture (nic-dried) as per ASTM D 7582-15

(iii) Equilibrated Moisture (60% RH & 40°C) as per IS 1356 (Part-I), 1584 Reaffirmed 2019

(iii) Gross calerific value (CCV; air-dried) as per ASTM D 5865-19

(b) None of the experiment is performed by external service provider

(v) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

भीर पूर्ण आई० अराध- केन्द्रीय समय एवं होंचा अनुसंधान विस्ता CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanbad P.O. F.R.L. PIN-528108, Jharkhand

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(Council of Scientific and Industrial Research)
Barwa Road, Dhanbad - 825015, Jharshand, India
An ISO 9001 Certified Institute



Date of issue: 30,10,2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA)
UNLOADING END ANALYSIS REPORT
Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15869 B
Name of Coal Company- NORTHERN COALFIELDS LIMITED
Loading Arra/Siding: DCSN
Name of Power Utility- NABINAGAR POWER GENERATION COMPANY
Test Material: COAL

			8				
5.%	Sneple 10	Date of Sampling (Collection)	RR Quality (Mt)	RRNs) F. Nac Na	R.H. Date	Total Moleture %	
1	TPS/UI5413	14.07.2023		161014104	10000	16.2	

Name

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019

(iii) None of the experiment is performed by external service provider

(iv) This report should not be replicated or reproduced

Ald 30.10.21

(Signature of Authorized Signatory)

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Ranchi: 2 +91-651-2461394, Roorkee: 2 +9101332-275998

Sample ID Selection

	10 5 F 15 F 10 F 10 11 10 11 11 11 11 11 11 11 11 11 11	Select Sample 10)
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to Al	Filter By Run Type: Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	

		Instrument MAC:	
Sample ID:	RQA-DC-U15413	Date:	Fri Oct 27 08:44:26 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.5257	EE Value:	928.599
Jacket Temp:	29.9340	Temp. Rise:	4.0770
Weight:	0.8035	Spike Weight:	0.000.0
Fuse:	50.0000	Acid:	8.0000
Sulfur:	0.4800		
Units Multiplier:	1	Gross Heat:	4628.75
Onics Prompher		Units:	cal/g



सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान 183. Central Institute of Mining and Fuel Research

(वैज्ञानिक तथा औदांगिक अनुसंपान परिषद्) (Council of Scientific and Industrial Research) Barwa Road, Dhambad - 826015, Jharkhand, India बरवा रोह, धनवाद - 826 व्राइ, झारखण्ड, भारत An ISO 9001 Certified Institute एक आई इस ओ १०३१ प्रमाणित संस्थान





Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA) ULR No.-TC-104352300015870F UNLOADING END ANALYSIS REPORT Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15870 A

Name of Coal Company- MAHANADI COALFIELDS LIMITED

Loading Area/Siding: LOMB

Name of Power Utility- NABINAGAR POWER GENERATION COMPANY

Duration of Performance of Analysis: 25.10.2023 to 28.10.2023

Test Material: COAL

Relative Humility of laboratory(%): 52.0 Temperature of laboratory(9C): 22.5

		Los strato			ā	Name Rate MCI			Aintriett	man)		od maistan KH & 40°1	huda (56%) T	
SLNs	Sweple ID	Date of Surpling (Collection)	Date of proporation	Date of sample receiving at laboratory	RR Quantity (Mb)	ILRNo./ T. Nane Na.	R.R. Date	M 5	ASU%	GCV (Krakky)	9%	ASSESS.	GCV (Kolky)	Analysol Grade
1	TPS/U15414	14,07,2028	19.07.2023	25.07.2023		162064064	100000	8.2	46.7	3042,98	7.1	67.3	3079	GIS

Note:

(i) Sample collected as per FSA by CSIR-CIMFR

(ii) Ash , Moisture (air-dried) as per ASTM D 7582-15

- (iii) Equilibrated Moisture (60% RH & 40°C) as per IS 1350 (Part-I), 1984 Reaffirmed 2019
- (iii) Gross calorific value (GCV; air-dried) as per ASTM D 5865-19
- (iv). None of the experiment is performed by external service provider
- (v) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

मीठ स्मृत आहेर असर- वेन्द्रीय वानन एवं हिंबन अनुस्थान स्त्यान CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dheabed P.O.- F.R.L. PIN-528105, Jharkhand

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Website: www.cimfr.nic.in



सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान ¹⁸⁴ CSIR-Central Institute of Mining and Fuel Research

(वेद्यानिक तथा औद्योगिक अनुमंखन परिषद) वरवा रोड, वनवाद - 826 015, ब्रारखण्ड, भारत एक अर्ड एम औ 9001 प्रमाणित गंत्यान (Council of Scientific and Industrial Research)
Banwa Road, Dhanbad - 826015, Jharkhand, India
An ISO 8001 Certified Institute



Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA)
UNLOADING END ANALYSIS REPORT
Test Report No.- CIMPR/DEN/TPS/UNLD/OCT/23-24/15870 B
Name of Coal Company- MAHANADI COALFIELDS LIMITED
Loading Area/Siding: LOMB
Name of Power Utility- NABINAGAR POWER GENERATION COMPANY
Test Material: COAL

				nitrop Raw/ MGR		
8.50	Sample III	Businer Sampling (Caterine)	IKR Quantity (MI)	R.R.Ne./ F. Note No.	R.R. Date	Total Moltare S
1	TPS/UI5014	14,07,2023		162084064	J. Access	15.5

Note

(i) Sample collected as per FSA by CSIR-CIMFR.

(ii) Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019

(iii) None of the experiment is performed by external service provider

(iv) This report should not be replicated or reproduced

Ald 30. 10.23

(Signature of Authorized Signatory)

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Ranchi : 2 +91-651-2461392 Foorkee : 2 +9101332-275998

Website: www.cimfr.nic.in

Sample ID Selection

	12/20/20/20/12/04/22/05/05/05	Select Sample II)
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to Al	Fliter By Run Type: Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	× III

		Instrument MAC:	00:60:0C:85:14:53
Sample ID:	RQA-DC-U15414	Date:	Fri Oct 27 08:53:47 2023
Method:	Dynamic	Туре:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.5398	EE Value:	928.599
Jacket Temp:	29.9224	Temp. Rise:	4.8273
Weight:	0.6052	Spike Weight:	0.4074
Fuse:	50.0000	Acid:	8,0000
Sulfur:	0.6500		
Units Multiplier:	1	Gross Heat:	3042.98
- Contract of the Contract of		2 15 15 45 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1	and to

Units:

Pass



विज्ञानिक तथा ओव्वांनिक अनुसंधान परिषदा वरवा रोड, बनवाद - 826 015, झारखण्ड, भारत एक आई एस ओ 9201 प्रमाणित संस्थान

सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान 186. Central Institute of Mining and Fuel Research

(Council of Scientific and Industrial Research) Barwa Road, Dhanbad - 826015, Jharkhand, India An ISO 9001 Certified Institute



Date of issue: 30.10.2023

TEST REPORT

LAB NAME: Coal Characterisation Lab. (RQA) UNLOADING END ANALYSIS REPORT Test Report No.- CIMFR/DHN/TPS/UNLD/OCT/23-24/15865 B Name of Coal Company- NORTHERN COALFIELDS LIMITED Loading Area/Siding: JNCS Name of Power Utility- NABINAGAR POWER GENERATION COMPANY Test Material: COAL

				taiway Rober MGR	Ĕ	
SL No	Sample 10	Date of Sampling (Collection)	RR Quality (Mt)	R.H.Ne.J E. Note No.	R.H. Den	Total Montare Vi
1	TPS/015406	13,07,2923		161000127		14.7

(i) Sample-collected as per FSA by CSIR-CIMFR

(iii) Total Moisture as per 18 1350 (Part-1), 1984 Renffirmed 2019

(iii) None of the experiment is performed by external service provider

(iv) This report should not be replicated or reproduced

(Signature of Authorized Signatory)

को रक्त आई० जरूर- केन्द्रीय खात एवं हेच्य अनुसंदान संस्थान CSIR-Central Institute Of Mining & Fuel Research Govt, Of India, Dhanbad P.O. F.R.L. PIN-828108, Jharkhand

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Ranchi: 2 +91-651-2461392 Coorkee: 2 +9101332-275998

Website: www.cimfr.nic.in

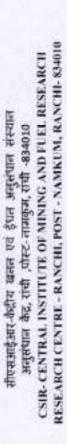
Sample ID Selection

		Select Sample ID	
Filter By Run Status: Any Status Final & Preliminary Final Only Preliminary Only Preweigh Only Note: Preweigh forces type to A	Filter By Run Type: Any Type Determination Standardization	N-201 N-202 N-203 N-204 N-205 N-206 N-207 N-208	Sister Control of the

		Instrument MAC:	00:60:00:85:14:53
Sample ID:	RQA-DC-U15406	Date:	Thu Oct 26 20:20:32 2023
Method:	Dynamic	Type:	Final
Mode:	Determination	Bomb ID:	1
Initial Temp:	29.7202	EE Value:	928.599
Jacket Temp:	29.9826	Temp. Rise:	4.9310
Weight:	0.8096	Spike Weight:	0.2036
	50.0000	Acid:	8.0000
Fuse: Sulfur:	0.5100		
Units Multiplier:	1	Gross Heat:	3983.64
Onics Mulcipher.		Units:	cal/g

								SOUR	CE WISE COA	L RAKE RECI	EIPT STATUS	OF NTPC-NA	ABINAGAR F	OR FY 2023-2	24							
	FSA (A	CQ)	В	CCL	CCL (FS	A+Div-in)	EC	L	Impo	orted	N	ICL	NCL (Fle	xi+Div-in)	N ⁻	ГРС	SE	CL	Т	HDC	Gran	d Total
	FSA (A	CQ)	В	CCL	C	CL	EC	L	Impo	orted	N	1CL	N	ICL	N ⁻	ГРС	SE	:CL	Т	HDC	Gran	d Total
Month	FSA Qty (MT)	Rakes	Rakes	Recvd. Qty (MT)	Rakes	Recvd. Qty (MT)	Rakes	Recvd. Qty (MT)	Rakes	Recvd. Qty (MT)	Rakes	Recvd. Qty (MT)	Rakes	Recvd. Qty (MT)	Rakes	Recvd. Qty (MT)	Rakes	Recvd. Qty (MT)	Rakes	Recvd. Qty (MT)	Rakes	Recvd. Qty (MT)
Apr-23	626692	157			106	400970			8	31545	13	48916	37	140237	48	189331					212	810998
May-23	648417	162			150	569283			9	35391	24	90706	43	163639	14	54613					240	913631
Jun-23	648417	162			99	379167	1	2810			26	99720	33	125092	42	163451					201	770241
Jul-23	570607	143			94	354625					26	99118	41	157378	45	174353					206	785473
Aug-23	570607	143			109	412253	1	3813			22	83073	34	124911	56	217554	8	31675			230	873279
Sep-23	570607	143			92	347869			2	8145	24	92559	33	123316	40	157154					191	729043
Oct-23	648417	162	4	15041	81	305240			9	35389	15	57962	49	185642	45	173623			1	3863	204	776761
Nov-23	648417	162	3	10767	89	331513			16	62655	36	136393	15	54287	50	197342			7	25567	216	818522
Dec-23	648417	162			106	405965			35	135633	21	78795	24	82181	22	87360			17	62481	225	852415
Jan-24	726227	182	2	7441	114	425590			32	125346	13	48941	22	77580	21	82548			21	77490	225	844936
Feb-24	726227	182	6	23322	85	319660			10	40193	23	85735	21	74334	2	7555			31	118604	178	669402
Mar-24	726227	182	21	80719	68	259400			18	72446	29	110114	20	72537	4	15486			25	94366	185	705069
Grand Total	7759275	1940	36	137290	1193	4511535	2	6623	139	546741	272	1032033	372	1381132	389	1520370	8	31675	102	382371	2513	9549770







Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 20.06.2022

LOADING END ANALYSIS REPORT

CB-08-2022

Dates

Text Naport No. CIMPR/RNC/TPS/53LCX/NBCC/JUN/2002/03 Name of Cost Company. Certral Cost Reld Utd.		Power Utility-NTPC NBCC Bate of start of artskris -2 Penduct tested - Coal Sam	C NBCC olysis -20.07.3022 oul Samole				* =	belative Hum emperature	elative Humidity of laboratory: emperature of laboratory:	laryt		San MATC	
Control Article Sciences Sciences (sector)			Date of	2	Railway Rake/MGR *	IGR *	2	Air-dried basis	sis	Equilibi basis (6	Equilibrated moisture basis (60% RH & 40°C)	40'C)	
St. Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	8.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	¥ E	ASH %	M % ASH % (keal/kg)	W %	ASH% (kc	GCV (kcal/kg)	Grade **
1 CCL/SLCS/NTPC.IV/NABINAGAR/NBCC/0038/G-11 20-06-2022 07-07-2022 09-07-2022 4012-60 141000027 20-06-2022 5.8	20-06-2022	07-07-2022	09-07-2022	4012.60	141000027	20-06-2022	5.8	46.5	46.5 3403.09 4.0 47.4 3468	4.0	47.4	3468	613

"Grade as par the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

(i) Sample collected as per FSA.

(ii) Testing Method followed- Ash & Mosteure as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, 5M as per IS 1350 (Part-I): 1984 Restfirmed 2013 (iii)Suphuris) value has been put in the borst disformeter as determined in the laboratory following (ASTM D-A239-18):

(by) Name of the experiment is performed by conternal service provider.

(w) This report sheard not be implicated or reproduced.

(w) This report sheard not be surpicely tosted. Reserve part of the sample will be distroyed after three months.



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Analytical results of coal samples collected by CSR-CIMFR (Third Party Sampling) thering the period 25.05.2022 TO 31.05.2022

LOADING END ANALYSIS REPORT

Date:06-07-2022

Report of C	Test Report to: -CMHIR/RINC/TPS/NLCC/NBCC/MAY/3022/34 Name of Cost Company - Central Coal Field Ltd. Loading Avea/fision-RUIDIN		Prover Utility-NTPC-MBCC Date of start of analysis -GLG Product tested - Coal Sample	Power Utiliny - MTPC-MBCC Date of start of analysis -GL/07-2022 Product tested - Coal Sample					Relative Humidity Temperature of Is	Relative HumidRy of Jaboratory Temperature of Inboratory:	Aug.		368	
			in the second	Date of	Ra	Rallway Rake/MGR	ign.		Air-dried basis	basis	Equilibr (6	Equilibrated moisture basi (50% RH & 40°C)	ture basis	
187 ≭ ≜	Sample 10	Date of collection	Date of preparation	receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	×	ASH 36	GCV (Bcol/kg)	M36	ASH%	GCV (kcal/kgl)	Analysed Grade **
	CCL/BUKRU/NTPC-IV/NABINAGAR/NBCC/0024/6-11	25-05-2022	16-06-2022	18-06-2022	3990.30	161000170	161000170 26-05-2022	7.4	35.0	4114.71	7.2	35.1	4124	611
20	CCL/BUKRU/NTPC-IV/NABINAGAR/NBCC/0025/G-11	26-05-2022	16-06-2022	18-06-2022	3630.00	161000171	27-05-2022	7.3	35.1	4098.74	7.4	35.1	4094	611
	CCL/BUKRU/NTPC-IV/NABINAGAR/NBCC/0026/G-11	28-05-2022	16-06-2022	18-06-2022	4027.90	161000172	28-05-2022	7.3	35.1	4102.34	7.5	35.0	4093	611
	CCL/BUKRU/NTPC-IV/NABINAGAR/NBCC/0027/G-11	29-05-2022	16-06-2022	18-06-2022	4161.40	141000016	30-05-2022	7.3	35.0	4110.94	7.6	34.9	4098	611
	CCL/BUKRU/NTPC-JV/NABINAGAR/NBCC/0029/G-11	31-05-2022	16-06-2022	18-06-2022	4041.31		161000173 01-06-2022	9.9	38.4	3866.91	6.9	38.3	3854	612

* Customer Provided Information

**Grade as per the website of the Ministry of coal (www.coal.al.Lin/major-statistics/coal-grades), www.coal.gov.in/major-statistics/coal-grades)

(i) Sample collected as per PSA.

Note:

(iii) Testing Method followed: Ash & Moishure as per ASPM 0-7540-35 & GCV as per ASTM 0-586-18, DM as per is 1350 (Part-i): 1964 Restfirmed 2011. [iii]Sulpher(i) value has been put in the bords calcrimeter as determined in the laboratory following (ASTM 0-4235-18).
[iv] None of the experiment is performed by external service provider.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months (v) This report should not be replicated or reproduced.

PAGE 1 OF 1

(Authorized Rigination) Call-Courte, IIC, BANCH



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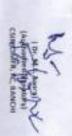
TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 01.06.2022 TO 27.06.2022

LOADING END ANALYSIS REPORT

LONG TO	Team Impair No Limita (MNC/PS/BICC/NBCC/LIM/2002/95 Name of Cast Company. Central Cool Field Ltd. Loading Area/Soling 6UXXIII		Power Utility- NTPC-NBCC Date of start of analysis -20.0 Product tested - Coal Sample	Power Utility- ATPC-NBCC Date of start of analysis -20.07.2022 Product tested - Coal Sample	-				Relative	sensitiv of laborators	Hanne		365	
91				Date of	20	Railway Rake/MGR *	* ND8		Air-dried basis	basks	Equilib	Equilibrated moisture basis (60% RH & 40°C)	ture basis (0°C)	88_
18	- senjus tu	collection	preparation	receiving at laboratory	Quantity	R.R.No./ F. Note No.	R.R. Date	×	W HSV	GCA/yes	NN	ASH%	GCV (hcal/kg)	Grade **
-	CCL/BUKRU/NTPC-JV/NABINAGAR/NBCC/0030/G-11	01-06-2022	04-07-2022	09-07-3033	Anna son	151000131				-			2000	613
	CCL/CURRU/NTPC-JV/NABINAGAR/NBCC/0031/G-11	02-06-2022	04-07-2022	09-07-2022	4030 00	*********	2202-90-30	0.3	2.34	2005.00	9,5	# 6	2092	613
	CCL/BURNU/NIPC-JV/NABINAGAR/NBCC/0033/G-11	04-06-2022	04-07-2022	09-07-2022	1894.00	161000176	05.06.2022	100	95.0	201100	75	36.6	3932	613
n 4	CC/BORNO/NIPC-JV/NABINAGAR/NBCC/0038/G-11	11-06-2022	04-07-2022	09-07-2022	3816.20	161000178	12-06-2022	6.7	410	H5 1251	6.1	42.2	3577	613
On I	CCL/BURBLI/MTDC W/MARINACAN/MDCC/0043/G-11	18-06-2022	05-07-2022	09-07-2022	3823.90	161000179	18-06-2022	6.7	39.1	3734.84	6.4	39.2	3747	612
7	CCL/BURBLIATEC DI MARINANI PROCESSO (CCL/BURBLIATECT)	21-06-2022	05-07-2022	09-07-2022	1810.00	161000180	22-06-2022	6.8	39.4	3795.71	6.4	39.6	3812	612
	CCL/BUKBU/NIPC IV/NABINACAP/NBCC/0050/G-11	26-06-2022	06-07-2022	09-07-2022	3899.80	161000181	27-06-2022	6.9	39.1	3774.20	6.7	39.2	3782	612
1	TT-B/TCMA/N-Year Junearement Co.	27-06-2022	06-07-2022	06-07-2022 09-07-2022	4166.40	161000183	28-06-2022	n	20.0	1735.75	6.6	39.9	3744	612

^{**}Grade as per the websits of the Ministry of cost (www.cost.stc.st/major-statutoc/cost-grades, www.cost.gov.st/major-statistics/cost-grades)



Sample collected as per FSA.

⁽ii) Testing Method followed - Auh & Moisture as per ASTM D-7982-15 & . OCV as per ASTM D-5985-19, EM as per IS 1500 (Part-I): 1994 fundfurned 2015 (Bill)suphur(s) value has been put in the boesh calcrimater as determined in the laboratory following (AITM D-4259-38).

⁽fix) Name of the superintent is performed by abbarral service provider

⁽v) This report should not be replicated or reproduced.



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 10.07.2022 TO 13.07.2022

LOADING END ANALYSIS REPORT

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Date of			**	elative Humidity of 1	of leboratory:		27.0	
Date of	Railway Rake/MGR	AGR.	4	Air-dried basis	Equili	brated moisture (50% RH & 40°C)	quilibrated moisture basis (60% RH & 40°C)	The state of the s
collection preparation receiving at	R.R. R.R.No./ F. Quantity Note No.	R.R. Date	×	ASH % (Re	GCV MB	M3s. ASH3s	(kcat/kg)	Analysed Grade **
CCL/SLCS/NTPC-IV/NABINAGAR/NBCC/0040/G-12 10-07-2022 03-08-2022 08-08-2022	3968.60 161000310	10-07-2022	6.2		33.56 5.7		1	612
CCL/SLCS/NTPC-JV/NAIHNAGAR/NECC/0042/G-12 12-07-2022 03-08-2022 08-08-2022	3951.00 141000028	12-07-2022	6.4		3799.20 5.9	9 41.9	3819	612
CCL/SLCS/NTPC-IV/NABINAGAR/NBCC/0043/G-12 13-07-2022 03-08-2022 08-08-2022	3583.20 161000311	13-07-2022	6.4	41.8 37	72.44 5.6			612

(Dr. Maethu Thai | JAuthorised Signatory) | CSR. COARR, RC, RANCH

⁽ii) Sample collected as per PSA.

(iii) Testing Method followed: Ach & Moisture as per ASTM 0-7583-LS & GCV as per ASTM 0-5865-19. EM as per IS 1150 (Part-I): 1984 Reaffrmed 2013.

(iii) Sulphur(S) which has been paid in the bomb saformater as determined in the laboratory following (ASTM 0-4290-18).

(iv) None of the experiment is performed by noticinal service provides.

(iv) This report should not be registrated or reproduced.

(iv) This report should not be registrated or reproduced.



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 20.02.2023 TO 26.02.2023

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4 CCL/S		3 001/2	2 (CL/5	1 (((/)	¥ 5		193 He of Coal Co
	CCL/SLCS/NTPC-IV/NABINAGAR/NBCC/0070/G-11	CCL/SLCS/NTPC-IV/NABINAGAR/NBCC/0069/G-12	CCL/SLCS/NTPC-JV/NABINAGAR/NBCC/0066/G-12	CCL/SLCS/NTPC.JV/NABINAGAR/NBCC/0065/G-10	Sample ID		Teleport NoCIMER,/RNC/TPS/SLCS/MBCC/FEB/2023/07 Make of Coal Company. Central Coal Field Ltd. Stree/Siding-Shivpoor (Amarpas Area)
	25-02-2023	24-02-2023	21-02-2023	20-02-2023	Date of collection	F 2	
16.02.3032	16-03-2023	16-03-2023	16-03-2023	16-03-2023	Date of preparation		Power Usiny, WTPC MBCC Data of start of analysis -11.05.2023 Product tested - Coal Sample
30.02.3032	20-03-2023	20-03-2023	20-03-2023	20-03-2023	receiving at laboratory	Date of	C NBCC silynii -11.05.2023 sai Sample
OU MOS	4041.40	4078.48	4046.12	3977.60	R.R. Quantity (Mt)	2	
161000325	161000324	161000323	161000321	161000320	R.R.No./ F. Note No.	Railway Rake/N	
26-02-2023	25-02-2023	24-02-2023	21-02-2023	20-02-2023	R.R. Date	e/MGR *	
3.6	3.5	3.7	3.7	3.7	×		
42.8	43,4	41.6	42.4	39.2	ASH %	Air-dried bask	Relative Hi Temperatu
4010.34	3956.23	4085.38	4020,61	4300.27	GCV (kcal/kg)		umidity of labors
4.2	4.0	4.6	3.7	4.3	NS	Equilibra (60	tterv:
42.5	43.2	41.2	42.4	39.0	ASH%	SON RH & 40°C)	
3985	3936	4047	4021	4273	GCV (kcal/kg)	(60% RH & 40°C)	Date:
612	612	611	611	611	Grade ***		15-05-2023

^{*} Customer Provided Information



^{**}Grade as per the website of the Ministry of coal (www.coat.nic.in/major.ntnitics/coal-grades, www.coat.gov.in/major.ntatiotics/coal-grades)

⁽i) Sample collected as per FSA.

[[]ii] Testing Method followed - Ack & Mointure as per ASTM D-7982-15 8. GCV as per ASTM D-586-15, EM as per IS 1330 (Part-I): 1984 fluidimed 2013 (iii)Sulphur(s) value has been put in the boint colorisener as determined in the laboratory following (ASTM D 4239-18).

⁽iv) None of the experiment is performed by external service provider.

 ⁽a) This report should not be replicated or regraduoed.
 (a) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.



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Analytical results of cost samples collected by CSIR-CIMFR (Third Party Sampling) during the period 22.02.2023 TO 04.03.2023

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194	eport NoCIMERQNINC/TES/SLCS/NBCC/FEB-MAIN/2023/08- of Cool Company. Central Coal Feld Ltd. g. Area/Siding Shinpton (Amarquili Area)		Power Unity-NTPC NBCC Date of start of analysis :18:05.3923 Product tested - Coal Sample	C NBCC alysis -18 d5 JB23 oal Sample					Relative H	talether Humelthy of laboratory: temperature of laboratory:	15 B-11	ikan	orp.	25.4C 388 0916:
				Date of	#	Railway Rake/MGR *	GR.		Air-dried !	2	sks	sts Equilibra		sts Equilibrated meisture basis (60% RH & 40°C)
£ 75	Sample ID	Date of collection	Date of preparation	receiving at laboratory	Quantity (Mit)	R.R.No./F. Note No.	R.R. Date	N 36	X HSV	100	BCH/ND GCV	GCV MSs		MOS
tt	CCL/SLCS/NTPC-JV/NABINAGAR/NBCC/0067/G-11	22-02-2023	16-03-2023	20-03-2023	4039.20	161000322	22:02:2023	3,6	42.6	4	18.860	096.81 4.1		4.1 42.4
14	CCL/SLCS/NTPC-IV/NABINAGAR/NBCC/0075/G-12	01-03-1023	01-04-2023	03-04-2023	4041.92	161000326	01-03-2023	1.9	44.9		3882.37	882.37 3.1	3,1	3,1
3	CCL/SLCS/NTPC-IV/NABINAGAR/NBCC/0078/G-12	02-03-2023	01-04-2023	03-04-2023	4030.80	161000327	02-03-2023	2.0	45.5	38	3887,25	100	4,0	4.0 44.6
	CCL/SLCS/NTPC-JV/NABINAGAR/NBCC/0079/G-11	03-03-2023	01-04-2023	01-04-2023	3984.80	161000328	03-03-2023	2.0	37.6	456	4549.71	19.71 5.1		5.1 36.4
ut.	CCL/SLCS/NTPC-JV/NABINAGAN/NBCC/0080/G-12	04-03-2023	01-04-2023	03-04-2023	4039.80	161000329	04-03-2023	2.1	45.2	100	3921.09	1.09 4.8		4.8 44.0

(Authorized Signatory) (Dr. M.X. Saini)

CSIR-CIMIR, BC, RANCHI

END OF TEST REPORT

^{**}Grade as per the website of the Ministry of stall (www.stall.nlt.ln/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

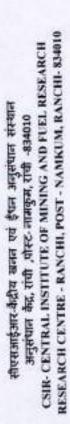
⁽I) Sample collected as per FSA.

^[8] Testing Method followed - Auh & Mosture as per ASTM D-TSIX-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Part-t): 1384 Realitimed 2013

⁽iit)Sulphur(s) value has been put in the borns calarimeter as determined in the laboratory following (ASTM D 4339-18).

[[]M] None of the experiment is performed by external service provider. [v] This report should not be replicated or regraduced.

⁽vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.





Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 09.04.2022 to 13.04.2022

LOADING END ANALYSIS REPORT

Sample Date of Equilibrated Sample R.R. R.R.No./F. R.R. Date M.Y. ASH S. GCV MYS MYS GCV MYS	The B	and come have a related from June from American American			-									Date:13-0
Sample ID Date of collection Date of preparation R.R.R. R.R.R. Date M.S. R.R. Date Air-dried basis Equilibrated mois (60% RH & 4) NABINAGAR/NBCC/0019/G-11 11-04-2022 15-04-2022 19-04-2022 19-04-2022 19-04-2022 19-04-2022 19-04-2022 19-04-2022 23-04-2022	Name	open mo-company central Cast Held Ltd. y Arna/Stding-Rajdhar Siding	(2)() =	Data of start of a Product histed -	nalysis -11.05.20. Coel Sample	а				Relation H.	amidity of laborates	erstory:		M. 7.C
Sample 1D Date of collection Preparation receiving at R.R. No./ F. R.R. Date M.S. ASH S. GCV Mrs. ASH S. A	1			000000	Date of	Ra	Ilway Rake/M	GR.*	4	ir-dried b	ads	Equilibr (6	ated mole	ture basi 10°C)
CCL/RID/NTPC-IV/NABINAGAR/NBCC/0023/G-11 09-04-2022 15-04-2022 3967.60 161006328 09-04-2022 2.7 42.4 3800.69 5.6 41.1 CCL/RID/NTPC-IV/NABINAGAR/NBCC/0023/G-11 12-04-2022 15-04-2022 4023.20 161006332 12-04-2022 2.2 54.9 2696.84 4.8 53.0 CCL/RID/NTPC-IV/NABINAGAR/NBCC/0026/G-11 12-04-2022 17-04-2022 4133.30 161006334 13-04-2022 2.7 42.2 3805.56 5.8 40.9 CCL/RID/NTPC-IV/NABINAGAR/NBCC/0026/G-11 13-04-2022 17-04-2022 4133.30 161006334 13-04-2022 2.7 42.2 3805.56 5.8 40.9	192	Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./F. Note No.	R.R. Date	××	ASH %	GCV (lical/lig)	New New	ASH%	GCV (kcal/kg
CCL/RUD/NTPC-IV/NABINAGAR/NBCC/0023/G-11 11-04-2022 15-04-2022 4023.20 161000331 12-04-2022 2.7 42.4 3800.69 5.6 41.1 CCL/RUD/NTPC-IV/NABINAGAR/NBCC/0025/G-11 12-04-2022 17-04-2022 19-04-2022 4133.0 161000331 12-04-2022 2.2 54.9 2696.34 4.8 53.0 CCL/RUD/NTPC-IV/NABINAGAR/NBCC/0026/G-11 13-04-2022 17-04-2022 19-04-2022 4133.0 161000334 13-04-2022 2.7 42.2 3805.56 5.8 40.9	-	CCL/RID/NTPC-IV/NABINAGAR/NBCC/0019/G-11	09-04-2022	150	19-04-2022	3967.60	161000328	09-04-2022	2.8	41.8	3857.78	4.3	41.2	3798
CCL/RUD/NTPC-IV/NABINAGAR/NBCC/0025/G-11 12-04-2022 17-04-2022 19-04-2022 4113.30 161000332 12-04-2022 2.2 54.9 2696.84 4.8 53.0 CCL/RUD/NTPC-IV/NABINAGAR/NBCC/0026/G-11 13-04-2022 17-04-2022 19-04-2022 4113.30 161000334 13-04-2022 2.7 42.2 3805.56 5.8 40.9	M	CCL/RUD/NTPC-IV/NABINAGAR/NBCC/0023/G-11	11-04-2022	15-04-2022	19-04-2022	4125.45	161000329	11-04-2022	2.7	42.4	3800.69	5.6	41.1	3687
CCL/RID/NTPC-IV/NABINAGAR/NBCC/0028/G-11 13-04-2022 17-04-2022 4118.30 161000334 13-04-2022 2.7 42.2 3805.56 5.8 40.9 CCL/RID/NTPC-IV/NABINAGAR/NBCC/0028/G-11 13-04-2022 17-04-2022 19-04-2022 4096.30 161000334 13-04-2022 2.7 42.2 3805.56 5.8 40.9	m	CCL/RJD/NTPC-IV/NABINAGAR/NBCC/0025/G-11	12-04-2022	17-04-2022	19-04-2022	4023,20	161000331	12-04-2022	2.2	54.9	2696.84	4.8	53.4	2625
CCI,/RID/NTPC-IV/NABINAGAR/NBCC/0028/G-11 13-04-2022 17-04-2022 19-04-2022 4996.30 161000334 13-04-2022 2.7 42.2 3805.56 5.8 40.9	4	CCL/RJD/NTPC-JV/NABINAGAR/NBCC/0026/G-11	12-04-2022	17-04-2022	19-04-2022	4113,30	161000332		2.2	54.4	2809.24	4.8	53.0	2735
	ın	CCL/RJD/NTPC-IV/NABINAGAR/NBCC/0028/G-11	13-04-2022	17-04-2022	19-04-2022		161000334	13-04-2022	2.7	42.2	3805.56	5.8	40.9	3684

195

05-2022

* Customer Provided Information

**Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

Note:

(I) Sample collected as per FSA.

(ii) Tenting Method followed - Ash & Mulsture as per ASTM D-7942-15 & GCV as per ASTM D-5865-19, EM as per i5 1350 (Part-I): 1964 Reaffinned 2013 (III)Sulphurisi value has been put in the bomb calorimeter as determined in the laboratory following (ASTM 0 4239-18).

University of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(M) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Dr. Madhu flu) (Authoritaed Signatory) CSB-CIMEN, RC, RANCH



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 06.05.2022 TO 12.05.2022

LOADING END ANALYSIS REPORT

-2022			196	611	611	612	612	612	612	611	611
Date:03-06-2022	428 28.5°C	Equilibrated moisture basis (60% RH & 40°C)	GCV (kcal/kg)	4168	4246	3729	3755	3867	3819	4096	4167
	- 17	brated moisture (60% RH & 40°C)	ASH%	35.7	35.6	41.6	42.4	40.2	40.7	33.9	34.5
	ratory:	Equilibra (60	MS	6.0	6.1	6.0	4.6	4.8	4.8	8.3	6.9
	Relative Humidity of laboratory Temperature of laboratory:	sise	GCV (kcal/kg)	4292.04	4377.33	3820.50	3813.85	3947.99	3875.12	4202.89	4207.50
	Relative Hs Temperatu	Air-dried basis	ASH %	36.8	36.7	42.6	43.1	41.0	41.3	34.8	34.8
	70.00	A	×	3.2	3.2	3.7	3.1	2.8	3.4	5.9	6.0
		3R *	R.R. Date	06-05-2022	06-05-2022	07-05-2022	07-05-2022	08-05-2022	08-05-2022	10-05-2022	161000374 12-05-2022
		Railway Rake/MGR *	R.R.No./ F. Note No.	161000365	141000039	161000366	161000367	161000368	161000369	161000373	161000374
		Rail	R.R. Quantity (Mt)	4097.90	4090.60	4039.18	4055.60	4089.83	4093.20	3976.00	3973.70
	S-MBCC alysis -25.05.202 oal Sample	Date of	sample receiving at laboratory	14-05-2022	14-05-2022	14-05-2022	14-05-2022	14-05-2022	14-05-2022	16-05-2022	16-05-2022
	Power Utility-NTPC-NIIICC Date of start of analysis -25.05.2022 Product tested - Coal Sample		Date of preparation	09-05-2022	09-05-2022	09-05-2022	12-05-2022	13-05-2022	13-05-2022	15-05-2022	2022
			Date of collection	06-05-2022	06-05-2022	07-05-2022	07-05-2022	08-05-2022	08-05-2022	10-05-2022	12-05-2022 15-05
	Test Report No. CIMFR/RINC/TIPS/RIO/WSCC/MAY/2022/10 Name of Cost Company: Central Cost Field Ltd. Loading Anni/Stding-Raidhur Skling		Sample ID	CCL/HUD/NTPC-JV/NABINAGAR/NBCC/0086/G-11	CCL/RID/NTPC-IV/NABINAGAR/NBCC/0087/G-11	CCL/RID/NTPC-IV/NABINAGAR/NBCC/0088/G-11	CCL/RID/NTPC-IV/NABINAGAR/NBCC/0090/G-11	CCL/RID/NTPC-IV/NABINAGAR/NBCC/0092/G-11	CCL/RJD/NTPC-IV/NABINAGAR/NBCC/0093/G-11	CCL/RJD/NTPC-JV/NABINAGAR/NBCC/0097/G-11	CCL/RJD/NTPC-IV/NABINAGAR/NBCC/0101/G-11
	Test Rep Name of Landing		≢ 193	-	2	3	4	s	9	7	00

^{*} Customer Provided Information

Note



CSR-CIMFR, RC, RANCH (Authorized Signatory) (Dr. M.R. Salni)

[&]quot;"Grade as per the website of the Ministry of coal loww.coal nit.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

⁽i) Sample collected as per FSA.

[[]II] Tussing Method followed: Ash & Meisture as per ASTM D-7582-15 & GCV as per ASTM D-5885-19, EM as per 13 1330 [Part-I): 1384 RealFirmed 2015

⁽iii)Sulphuris) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4239-18).

⁽by) None of the experiment is performed by external service provider.

⁽v) This report should not be replicated or reproduced.

⁽vi) The result related to the sample tested. Reserve part of the sample will be destroyed after tives months

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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 01.06.2022 TO 05.06.2022

LOADING END ANALYSIS REPORT

te:27-06-2022

7									
The second	548 27.75	Equilibrated moisture basis (60% RH & 40°C)	GCV (kcal//kg)	3671	3929	3980	4423	4602	4275
	2000	brated moisture (60% RH & 40°C)	ASHIS	41.2	38.0	37.4	32.3	29.9	33.7
	utory:	Equilibra (60	*	6.6	6.2	6.2	9.9	7.1	6.7
	Relative Humidity of laboratory: Temperature of laboratory:	asis	GCV (kcal/kg)	3781.21	3949.52	3988.24	4441.46	4621,63	4288.99
	Relative Hu Temperatu	Air-dried basis	ASH %	42.4	38.2	37.5	32.4	30.0	33.8
		4	N %	3.8	5.7	6.0	6.2	6.3	6.4
		3R *	R.R. Date	01-06-2022	02-06-2022	03-06-2022	04-06-2022	05-06-2022	05-06-2022
		Railway Rake/MGR *	R.R.No./ F. Note No.	161000394	141000043	161000395	161000396	161000397	161000397
		Ra	R.R. Quantity (Mt)	4008.86	3939.30	4077.70	4104.64	497.00	3393.30
CABCC	alysis -20.06.2022 nal Sample	Date of	receiving at laboratory	04-06-2022	08-06-2022	08-06-2022	08-06-2022	08-06-2022	08-06-2022
Printer Littlew ACDC ABCC	Date of start of analysis -20.06.2022 Product tested - Coal Sample	The second	Date of preparation	02-06-2022	04-06-2022	04-06-2022	07-06-2022	07-06-2022	07-06-2022 08-06-2022 3393.30 161000397 05-06-2022
		State State	Date of collection	01-06-2022	02-06-2022	03-06-2022	04-06-2022	05-06-2022	05-06-2022
Pets Report NoCIMER/BNC/TPS/RID/NBCC/H3N/2003/15	Name of Coal Company. Central Coal Neid Utd. Coading Area/Siding-Rajdhar Siding		Sample ID	CCL/RJD/NTPC-JV/NABINAGAR/NBCC/0144/G-11	CCL/RJD/NTPC-JV/NABINAGAR/NBCC/0146/G-11	CCL/RID/NTPC-JV/NABINAGAR/NBCC/0149/G-11	CCL/RJD/NTPC-JV/NABINAGAR/NBCC/0150/G-11	CCL/RJD/NTPC-JV/NABINAGAR/NBCC/0152/G-9	CCL/RJD/NTPC-JV/NABINAGAR/NBCC/0152/G-11
Test Res	Name o Loading		≭ 	1	2	m	4	ın	9

613 219 G12 610 69

Customer Provided Information

** Grade as per the website of the Ministry of coal leven.coal.no.in/major-statistics/coal-grades, www.coal-gov.in/major-statistics/coal-grades) Note:

(ii) Sample collected as per FSA.

(iii) Testing Method followed - Ach & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Part-I): 1964 Reaffirmed 2013 (III)Sulphuris) value has been put in the benth colorimeter as determined in the laboratory following (ASTM D 4239-18).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample hasted. Reserve part of the sample will be destroyed after three months,





सीएसआईआर-केन्द्रीय खनन एवं ईघन अनुसंघान संस्थान 🥯 🕒 R-Central Institute of Mining and Fuel Research

(वैज्ञानिक गया ओडोरिक अनुसंपान परिवर) बरवा रीर,पनबार - 826 015, जारक्या, भारत एक आई एम ओ १००१ प्रमाणित संस्थान

(Council of Scientific and Industrial Research) Barwa Road, Dhanbad - 826015, Jhanhand, India An ISO 9001 Certified Institute





Date of issue : 05.05.2022

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/LD/MAY/22-23/0729 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding: SPUR-2_INT Name of Power Utility-NTPC/NABINAGAR(NTPC, VINDHYACHAL) Duration of Performance of Analysis :28.64,2022 to 04.05,2022

Relative Humidity of laboratory(%)c 56.0

				Date of	Ra	dway Rake/N	IGR		Air-dried to			ed southern	havingship.	
SL No	Sample 10	Date of collection	Date of propagation	receiving at laborators	PSR Quantity (Min	R.R.Na./ F. Nate No.			TOUR THE	ocv.		RH & APC	GCV	Analyses Grade
1	TPS/22283	61.04.3433		EQ 7 (512517)		The state of	S.C. USE	31.74	ASH%	(Kenthg)	MS	ASHITE	(Kraffig)	
	11/0/22/33	01,04,2822	18.04.2022+	20.64.2622		002075		2.6	42.5	3975.66	5.9	41.1	3841	GIZ

N.B. Delay in sample preparation at leading site.

(i) Sample collected as per FSA.

(ii) Ash.& Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(Signature and Designation of Authorized Signatury)

क्रींत अभीक कुधार जिल्ल / Dr. Ashok Kr. Singh प्रमुख अनुसंधन समुद्र, शंस-पर पुण्यता अवकला विधान / BOBG, अपुत्र Division & Project Leader तीः इसन आई० आरथ- केन्द्रीय खनन दर्व ईयन अनुसंधान संस्थान CSIR-Central factions Of Mining & Fact Research Goot, Of lade, Disabed

P.O. F.R.L. PON-828108, Burkhard

Websit: www.cimfr.nic.in



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LOADING END ANALYSIS REPORT

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 04.07.3022 TO 12.07.2022

Date of start olanalysis -24.07.2022 Product bashed - Coal Sample POWER UNING-NINCE-NINCE Test Report No.-CIMIT(NAVC/TPS/RJD/NBCC/JUL/2022/22 Name of Cost Company. Central Cost Hold Ltd. Loading Area/Sidisg-Raigher Siding 196

Analysed Grade ** 턍 611 Equilibrated moisture basis (Schilde) 4150 4014 4122 4143 4168 (60% RH & 40°C) ASH% 33.2 34.5 36.9 35.5 34.2 7.5 6.9 MOS 89 6.7 Temperature of laboratory: (kcal/kg) 3961.96 4103.58 4049.93 4100.33 4128.01 Ş Air-dried basis ASH % 34.7 34.1 36.4 33.9 33.1 W.W 8.2 8.8 9.6 11-07-2022 11-07-2022 12-07-2022 1355.48 1610000406 12-07-2022 24-07-2022 R.R. Date Railway Rake/MGR * 1371.80 141000044 2615.80 141000044 2631.11 161000406 161000405 R.R.No./ F. Note No. Quantity 3979.50 Ē 18-07-2022 13-07-2022 18-07-2022 receiving at laboratory 18-07-2022 13.07.2022 Darte of sample 17-07-2022 17-07-2022 17-07-2022 09-27-2022 17-07-2022 preparation Dateo 12-07-2022 11.07.2022 11-07-2022 12-07-2022 04-07-2022 collection Date of

199

Date:04-08-2022

MALE

Relative Humidity of laboratory.

GII

**Grade as par the webothe of the Ministry of coal (www.coal.nic.in/majors.tatistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades) CCL/RID/NTPC-IV/NABINAGAR/NBCC/0189/G-11 * Customer Provided Information

Motes

CCL/RID/NTPC-IV/NABINAGAR/NBCC/0187/G-11

CCL/RID/NTPC-IV/NABINAGAR/NBCC/0189/G-9

•

CCL/RID/NTPC-JV/NABINAGAR/NBCC/0187/G-9

CCL/RID/NTPC-IV/N:\BINAGAR/NBCC/0180/G-8

m N

Sample 1D

(i) Sample collected as per FSA,

(iii) Tenting Wethod followed - Ash & Moisture as per ASTM D-2582-15 & GCV as per ASTM D-5865-19, DK as per 15 1350 (Part-I): 1384 Rusiffirmed 2013 (Histophuria) value has been put in the bomb calcrimeter as determined in the laboratory following (ASTM 0 4239-18).

(M) Note of the experiment is performed by external service provides.
 (v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months

CSIR-CIMER, NC, RANCHI (Authorized Signatury) Dr. Madhu Jhall

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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 05.05.2022 TO 08.05.2022

LOADING END ANALYSIS REPORT

Date:09-06-2022 beetony: 425,	Equilibrated mois (60% RH & 4	AN ASHN (Kcal/kg) Grade	45.2	33.0 4350
	Equilibrated moist (60% RH & 4	dis ASHN	45.2	
baratanya	Equilibra (60	N/A		-
2 5		-	4.8	8.9
nidity of la	sists	GCV (Rost/kg)	46.1 3496.03	4489.75
Relative Humidity of laboratory Temperature of laboratory:	Air-dried basis	ASH %	46.1	34.1
		×	2.9	3.8
	. H.	R.R.No./F. R.R. Date M78 ASH 78 Note No.	06-05-2022	09-05-2022
	Rathway Rake/MGR *	R.R.No./F. Note No.	151000430 06-05-2022 2.9	1259.04 151000433 09-05-2022 3.8 34.1 4489.75 6.8
	Rath	R.R. Quantity (Mt)	420.28	1259.04
NABINAGAR Iyin -25.05.2022 al Sample	Date of	receiving at faboratory	14-05-2022	10-05-2022 14-05-2022
Power Utility-NTPC NABINAGAR Date of start of analysis -25.05.2022 Product tessed - Coal Sample		preparation	09-05-2022 14-05-2022	10-05-2022
		collection	05-05-2022	08-05-2022
lest Report NoCMFR/RNC/TPs/DAKEA/NBCC/MAY/2022/11 Name of Coal-Company- Central Coal-Field Ltd. Andring Avau/String-DAKEA Siding (NK Acea)		Sample ID	CCI/DAKRA/NTPC-IV/NABINAGAR/NBCC/0032/G-12	CCI/DAKRA/NTPC-JV/NABINAGAR/NBCC/0036/G-11
Test Report No Name of Caal Loading Area/3	4	97	-	2

280

* Customer Provided Information

**Grade as per the webs to of the Ministry of coal (www.coal.nk.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades) Moto

[ii] Sample collected as per PSA.
[iii] Testing Mathod followed - Ash & Moisture as per ASTM 0-7982-15. 6. GCV as per ASTM 0-5983-19, UM as per IS 1350 (Part-0: 1984 Resifirmed 2013 [HIS-alphants) value has been put in this born calcinitates as determined in the laboratory following (ASTM 0-429-18).
[iv) None of the experiment is performed by external service provider.
(v) This report should not be replicated or reproduced.

(40) The result related to the sample texted. Reserve part of the sample will be deutstoyed after three months.

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TC-5897

Analytical results of coel samples collected by CSIR-CIMFR (Third Party Sampling) during the period 09.04.2022 TO 12.04.2022

LOADING END ANALYSIS REPORT

Date:20-06-2022	26.0% 26.0%		GCV Grade ***	3985 612	1984 612	4441 610	4423 610
۵	25 45	brated moisture (60% RH & 40°C)	ASHS	38.5	38.7	31.9	31.8
	rations:	Equilibrated moisture basis (60% RH & 40°C)	MES	6.1	6.1	7.1	7.5
	Relative Humidity of laboratory: Temperature of laboratory:	asis	GCV (Acal/Ng)	4039.68	4043.40	4526.74	4528.29
	Relative Hu Temperator	Air-dried basis	M % ASH %	39.0	39.3	32.5	32.6
		4	2 %	4.8	4.7	5.3	5.3
		GR *	R.R. Date	1973.20 161000448 09-04-2022 4.8	10-04-2022	11-04-2022	01-06-2022 4000-80 161000452 12-04-2022 5.3 32.6
		Railway Rake/MGR *	R.R.No./ F. Note No.	161000448	151000449	151000450	161000452
		Rai	R.R. Quantity (Mt)	1973.20	3976.15	3979.00	4000-80
CHBCC	alptis -15 DS 2022 and Sample	Date of	sample receiving at laboratory	01-06-2022	01-06-2022	01-06-2022	01-06-2022
Power URRIP-NITIC-NBCC	Date of start of analysis -15 DG 2022 Product texted - Coal Sample	1600	Date of preparation	30-05-2022	30-05-2022	31-05-2022	31-05-2022
			Date of collection	09-04-2022	10-04-2022	11-04-2022	12-04-2022 31-05-2022
Test Report NoCIMER/RENC/TPS//BCBM/NBCC/APM/2002/for	Name of Cost Company - Central Cost Relief Ltd. Leading Area/Stiting SALLIMATH		Sample ID	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0008/G-11	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0010/G-11	CCI/BALUMATH/NTPC.JV/NABINAGAR/NBCC/0012/G-11	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0015/G-11
Test Repo	Name of		# £ 19	86	7	m	*

201

(Dr. Madha ha) (Authorine Signifon) CHI CONTR, RC, RANCH

** Grade as per the water'ss of the Ministry of cost (www.cost.nic.in/major statistics/cost-grades, www.cost.gov.in/major-statistics/cost-grades)

(i) Sample collected as per FSA.

00 Treding Method followed - July & Maintaire as per ASTM D-7562-15 & GCV as per ASTM D-5865-19, EM as per IS 1859 (Part-I): 1984 Resiffered 2013

(8)Substurity value has been put in the bornth calonimeter as determined in the laboratory fallowing (ASTM D 4239-18).

(iv) Name of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(M) The result related to the simple tested. Reserve part of the sample will be destroyed after three months.

PAGE 1 OF 1



RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI- 834010 CSIR. CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH सीएसआईआर-केदीय खनन एव ईपन अनुसंपान संस्थान अनुसंपात केंद्र, रांची ,पोस्ट नामकुम, रांची -834010



TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 20.09.2022

LOADING END ANALYSIS REPORT

CC/3EP/2022/25	25		
ST REPORT NOCIMPR/RMC/TPS/DAKNA/WIRC	ame of Coal Company - Central Coal Reld Lts	ading Area/Siding-DAKRA Siding (NK Area)	

8	iii		
belative Humidity of laborator emperature of laboratory.	esis	GCV (kcsl/kg)	3896.76
Relative Hur Temperatur	Air-dried basis	ASH %	38.8
	•	N %	7.1
	. WS	R.R. Date M % ASH % (Kcsl/kg)	20-09-2022
	Railway Rake/MGR *	R.R.No./F. Note No.	161000463
	Rail	R.R. Quantity (Mt)	2206.60
AMBINAGAS Aysis -20.10.2022 ad Sample	Date of	sample receiving at laboratory	26-09-2022
Power Utility MTPC-NABINAGAI Dets of start of analysis -20.10.2022 Product tested - Coal Sangle		Date of preparation	25-09-2022
	1	Date of collection	20-09-2022
o, -CIMPR/RHC/TPS/CDARNA/NBCC/3EP/2022/25 Conyany - Central Coal Field Ltd. Siding-DAKRA Siding (NK Area)		Sample ID	1,DAKRA/NTPC-IV/NABINAGAR/NBCC/0143/G-11 20-09-2022 25-09-2022 26-09-2022 2206-60 161000463 20-09-2022 7.1 38.8 3896.76

199

CCI,/DAKRA/NTPC-IV/NABNAGAR/NBCC/0143/G-11 20-09-2022 25-09-2022 26-09-2022 20-2022 20-09-2022 7.1 * Customer Provided Information

**Grade as per the website of the Ministry of coef (www.coel.nic.in/major-statestics/coel-grades, www.coel.gov.in/major-statestics/coef-grades)

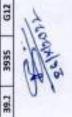
(i) Sample collected as per FSA.

(ii) Testing Method followed - Ash & Moisture as per ASTM D-7542-15 & GCV as per ASTM D-5865-19, EM as per IS 1950 (Pan-I): 1984 Restlfrmed 2013 (III) Ashar has been put in the bomb calorimener as determined in the laboratory Pollowing (ASTM D-4235-14).

(iv) None of the experiment is performed by external service provides.

(v) This repart should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.



202

Grade ** Analysed

200

(kcal/kg)

ASHK

M

6.2

Date: 26-10-2022

Equilibrated moisture basis

Relative Hamidity of laboratory:

(60% RH & 40°C)

CSIR-CIMPR, RC, RANCHI (Authorized Signatury) (Dr. M.K. Saint)



सीएसआईआर-केद्रीय खनन एवं ईधन अनुसंधान संस्थान अनुसंधान कंद्र, रांची ,पोस्ट- नामकुम, रांची -834010 CSIR- CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI- 834010



Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 01.11.2022

LOADING END ANALYSIS REPORT

Date:10-12-2022		basis	GCV Grade ** (kcal/kg)	257 611
Date	47% 22.A7C	Equilibrated moisture basis (60% RH & 40°C)	ASHS (kcal/kg	4.2
		(60% RP	MNs. ASI	8 32
	Relative Humidity of laboratory: Temperature of laboratory:	Equ	100	5.0 7.
	Humidity of	basis	Gent)	4279
	Relative	Air-dried basis	ASH %	32.6
			2 %	7.3
		AGR *	R.R. Date M.%. ASH % (kcal/kg)	01-11-2022
		Railway Fake/MGR *	R.R.No./ F. Note No.	151000468
	22	æ	R.R. Quantity (Mt)	3935.00
CARGO	Date of start of analysis -06.12.2022 Product tested - Coal Sample	Date of	sample receiving at laboratory	05-11-2022 3935.00 161000468 01-11-2022 7.3 32.6 4279.59 7.8 32.4 4257
States Unlike MTPC AMCC	Date of start of an Product tested - C	9	Date of preparation	02-11-2022
	64	25-1515-15	Date of collection	01-11-2022
First Report NoCIMPS/RNCTPS/RID/NeCC/NDV/2022/44	Name of Goal Company. Cantral Goal Feel Ltd. Loseling Ansa/Sidne-Sayther Sidne		Ol aliques	CCL/RID/NTPC-JV/NABINAGAR/NBCC/0346/G-11 01-11-2022 02-11-2022
Test Repo	Name of Loading A		# <u>#</u> 200	1

* Cuburer Provided Information

**6'30'C as per the webute of the Ministry of coal (www.coal.ne.in/major-statistic/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

(i) Sample collected as per PSA.

(II) Testing Mothed followed - Ash & Mointure as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, EM as per IS 1850 [Part-I]: 1984 Reaffirmed 2013

(illiSulphar(s) ratue has been put in the bomb calcrimeter as determined in the laboratory following (ASTMID A239-18).

(iv) hase of the experiment is performed by external service provider,

(v) This reportshould not be registered or reproduced.(vi) The result related to the sample tested. Reserve part of the sample will be disproyed after these months.

(Dr. M.K. Saint) (Authorized Signatory) CSR-CIMFR, RC, RANCH



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 03.11.2022

LOADING END ANALYSIS REPORT

POWER UNING NUMBERAGAR	Date of start of analysis -21,12,2022	Product tested - Coal Sample	
Test Regort NoCIMIN/NNC/TPS/DAKNA/NBCC/NOV/2022/32	Name of Coal Company- Central Coal Field Util.	Loading Area/Siding DAKRA Siding (NK Area)	

	Product tested - Coal Sample	oal Sample					properature	Temperature of Jaboratory.			23.070	- 10
_		Date of	28	Railway Rake/MGR *	- 88 ·	A	Air-dried basis	88	Equilibra (60	(50% RH & 40°C)	Equilibrated moisture basis (50% RH & 40°C)	
	Date of Date of collection preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./F. Note No.	R.R.No./ F. R.R. Dete M % ASH % GCV Note No.	* 2	ASH %	GCV (kcal/kg)		ASHK	MPS ASHTN (Real/Ng)	
F	200 1 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	200 44 9039	1636.60	161000631	62.11.3033	40	28.4	4020.85	5.3	38.5	4029	

204

611

Analysed Grade **

Date: 29-12-2022

6

Relative Hamidity of laboratory.

201

**Gode as per the website of the Ministry of east (www.cool.nic.in/majo-statisfics/cool-grades, www.cool.gov.in/major-statisfics/culties/grades)

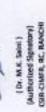
(i) Sample collected as per FSA.

(iii Tenting Method followed - Ash & Moistum as per ASTM D-7562-15 & GCV as per ASTM D-5869-18, CM as per IS 1350 (Pert-I; 1394 Reaffirmed 2013 (iii)Surpheric) value has been put in the bomb culorieners as determined in the laboratory following (ASTM D-ASIS-18).

(h) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after these months



END OF TEST REPORT



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LOADING END ANALYSIS REPORT

Analytical results of coal samples collected by CSIR-CIMIR (Third Party Sampling) during the period 06.12.2022 TO 16.12.2022

Railway Rake/MGR* Air-dried basis Equilibrated moisture basis			Predact tested - Coal Sample	
		0	1	
E R.R.No.J.F. R.R. Date M.N. ASH.N. (keal/kg)	neceiving at Quantity (Mt)	u de de	preparation	collection preparation
.10 161000476 06-12-2022 6.4 30.3 4450.07	19-12-2022 1760.10	19-1	15-12-3022	06-12-2022 15-12-2022
1610000476 06-12-2022 4.4 42.2	19-12-2022 2317.61	19.1	15-12-2022	06-12-2022 15-12-2022
151000478	12-2022 1876.15	19.1	17-12-2022	16-12-2022 17-12-2022 19-12-2022

205

**Grade as per the website of the Mintary of coal (www.cost.st.ch/major-stattstoy/cost-grades, www.cost.gov.hy/major-stattstox/coat-grades)

(i) Sample collected as per FSA.

(ii) Testing Method followed - Ash & Mointune as per ASTM ID-7582-15 & GCV as per ASTM ID-5805-15, EM on per IS 1250 (Part-ID-1565 foat-Illinead 2013) (III)Sulphar(S) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4239-13).

(iv) Note of the experiment is performed by external service provider. (iv) This report should not be replicated or reproduced.

(A) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Dr. M.X. Saist) (Authorized Signatory) CHECONTR, RC, RANCH I GO





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Analytical results of coal samples collected by CSIR CIMFR (Third Purty Sampling) during the period 07.12.2022 TO 11.12.2022

LOADING END ANALYSIS REPORT

-2023			Grade *	GIZ	612	612	G12
Date:30-01-2023	STS	o'co	GCV (heat/hg)	3975	31876	3955	3912
		Equilibrated moisture basis (60% RH & 40°C)	ASHA	18.9	38.7	37.2	37.8
	stock:	Equilibra (60	NA.	. 6.5	6.6	7.9	8.0
	Relative Humidity of laboratory. Temperature of laboratory:	sis	GCV (hcal/hg)	4029.81	1938.42	4032.45	4000.82
	Relative Hur Temperatur	Air-dried basis	ASH X	39.0	39.3	37.9	38.7
		4	2 2	476	5.1	6.1	5.9
		3R.*	R.R. Date	07-12-2022	09-12-2022	10-12-2022	11.12.2022
		Railway Rake/MGR *	R.R.No./ F. Note No.	161000483	161000484	161000485	161000486
	rrCn8CC netpite -27.03.2023 Cast Semple	Rail	R.R. Quantity (Mt)	4074.60	4038.00	3954.40	4006.60
		Date of	sample receiving at laboratory	14-12-2022	14-12-2022	34-12-3022	14.13.3022
	Power Utility-WTPC NBC Date of start of analysis Product tested - Coal Sa		Date of preparation	11-12-2022	11-12-2022	13-12-2022	48.13.3000
			Date of cellection	03-12-3022		10-12-2022	11 13 3059
	Name of Coal Company RMC/THS/NADC/NBCC/2022/46 Name of Coal Company Certral Coal Field Ltd.	hanc profession desprise (1900)	Sample ID	CCI /BID/NETBC-IV/NABINAGAB/NBCC/0398/G-11	CONTRACTOR INVARIANCE AND COMMUNICATION OF THE PROPERTY OF THE	CCI /BID/WTDC.IV/WARINAGAR/NECC/0402/G-11	Control Control of Control of the Control of
	Test Report Name of Co	(000)	⊭ <u>≨</u> 203	1.	-	4	

206

G12 G12

Customer Provided Information

**Scrade as per the website of the Meistry of coal (www.coal.ak.in/major-statistics/coal grades, www.coal.aps.in/major-statistics/coal-grades)

(ii) Sample collected as per PSA.

(iii) Testing Method followed - Ash & Molitairs as per ASTM D-1582-15 & GCV as per ASTM D-5803-19. UM as per 19.1990 (Part-1): 1984 Reaffirmed 2015 (EUSsigharts) value has been put to the bond calcimenter as determined in the laboratory following (ASTM D-429-13).

(iv) None of the experiment is performed by external service provider.

(iv) This report should not be replicated or reproduced.

(iv) This report should not be replicated by referre plant of the sample will be destroyed after three months.



CSIR-CIMPR, RC, RANCH

END OF TEST REPORT



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 15.12.2022

LOADING END ANALYSIS REPORT

022/4		
DEC/2		
BCC/1	FIRE	
N/OI	40	
N/S	SIE	Galler
(Jan	ā	da.
SH	tug	-Bale
ō,	Comi	Sidin
OIL 16	8	Areas
t Rep	10 41	ding
ě.	ğ	-8

Date of start of analysis -01.02.2023 Product tested - Coal Sangle Power Utiling-NTAC-NBCC

Equilibrated moisture basis MM 8.8 Relative Hunsdily of laboratory: Temperature of laboratory [kcal/kg] 4189.11 4355.12 200 Air-dried basis ASH % 34.4 36.7 M % 5.3 15-12-2022 15-12-2022 R.R. Date Railway Rake/MGR * 161000487 R.R.No./F. 3278.60 161000427 Note No. Quantity 676.80 (Mill) R.R. receiving at 19-12-2022 19-12-2022 **Taboratory** sample Date of 15-12-2022 16-12-2022 15-12-2022 16-12-2022 preparation Date of collection Date of CCL/RID/NTPC-IV/NABINAGAR/NBCC/0411/6-10 CCI/RID/NTPC-JV/NABINAGAR/NBCC/0411/G-11 Sample ID * Curtamer Provided Information

207

Grade ** Amilyso

200

ASHOU

(Ncsl/kg)

Date:03-02-2023

24.010

(60% RH & 40°C)

611 611

4026

4195

33.1 35.3

**Grade as per the website of the Ministry of coal (www.coal.nc.in/major statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

(I) Sample cofferted as per PSA,

17

204

No.

(ii) Testing Method followed - Ash & Molsture as per ASTM D-7582-15 & GCV as per ASTM D-2845-19, FM as per th 1350 (Part-i): 1984 Reaffined 2013 (Algorphuris) value has been put in the bomb calorimetre as determined in the laboratory following (ASTM D-4239-19).

(iv) More of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

[4] The result related to the sample tended, Reserve part of the sample will be destroyed after these months.



CS/R-CHAFF, RC, RANCHI

END OF TEST REPORT



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TC-5897

Analytical results of coal semples collected by CSIR-CIMFR (Third Party Sampling) during the period 22.32.2022

LOADING END ANALYSIS REPORT

TEST HEBOY NO COMPRIMENT/TPS/NUD/NECC/DMC/2002/50 Name of Coal Company, Central Coal Field Ltd. Loading Artis/Siding Rajdhar Siding

Sample ID

∌ <u>∮</u> 205

Date of start of analysis - 31.02, 3023 Product testaid - Coal Sample

Pawer Utility-NTPC-NECC

Relative Humbilty of laboratory. emperature of laboratory: (keal/kg) 200 Air-dried basis ASH % M % R.R. Date Railway Bake/MGR * R.R.No./ F. Note No. Cuantity (ME) receiving at laboratory sample Date of perparation Date of collection Date of

208

(kcal/kg)

ASHM

Ä

612

3580

38.0

0.0

4047.76

38.6

4.4

161000488 23-12-2022

3961.04

29-12-2022

24-12-2022

22-12-2022

Grade ** Analyses

GCV

Equilibrated moisture basis

(60% RH & 40°C)

23.37

ž

Date:27-02-2023

CCL/RJD/NTPC-IV/NABINAGAR/NBCC/0414/G-11 * Customer Provided Information

dather/coal-grades) **Grade as per the welstite of the Ministry of doa'l twen, coals nic leymage statistics/coal-grades, www.coel gos in/ major

Note

(i) Sample collected as per 15A.

(40 Texting Method followed - Aub & Mobitant as per ASTM D-1983-15 & OCV as per ASTM II-5865-18, FM as zer IS 1350 (Park-Q: 1984 Reaffermed 2013) (495-495 withe has been put in the bomb calcelmenter as determined in the baboratory following (ASTM III 4299-18).

(by) None of the experiment is performed by external service providers.

[y] This report should not be replicated or reproduced.

all be destroyed after three months (v) The result related to the sartiple tested. Reserve part of the

(Dr. M.X. Saint) (Authoritied Signatory) CSIR-CIMPR, RC, RANGH (kcal/kg)

ASHX

ž

612

3878

41.1

4.5

Grade ** Analysed

S

Equilibrated moisture basis

grattory

(60% RH & 40°C)

Date: 06-04-2023



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 31.01.2023

LOADING END ANALYSIS REPORT

Test Rep Name of Loading	ont NoChairs/Parc/Tres/Danska/NeCC/Jany/2023/455 Coal Company: Central Coal Field Ltd. New-Ysiding-Darkea Siding (NK Area)		Power USEN-ATPC-NABINAGAR Date of start of analysis -01.04.30 Product tested - Coal Semple	ower USBN-NTPC-hallmanGAR ate of start of analysis -01.04.2023 ostuct tested - Coal Sergife					Relative Hu Temperatur	eletive humbity of labor emperature of laborator
			-	Date of	æ	Reilway Rake/MGR *	GR.	III TO	Air-dried basis	sise
≢ ⊉ 06	Sample ID	Date of collection	Date of preparation	sample neceiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	P.R. Date M.N. ASH N.	N X	ASH %	GCV (kcst/kg)
1	CCI/DAKRA/NTPC-IV/NABINAGAR/NBCC/0223/G-11 31-01-2023 04-02-2023 08-02-2023	31-01-2023	04-02-2023	08-02-2023		2184.20 161000495 31-01-2023 4.3 41.2	31-01-2023	4.3	41.2	3886.56

**Gode is per the webshe of the Ministry of coal (www.coal.nic.In/major-statistics/coal-godes, www.coal.gov.in/major-statistics/coal-godes) 1 CCL/DAKRA/NTPC-IV/NABINAGAR/NBCC/0223/G-11 31-01-2023 04-02-2023 08-02-2023 08-02-2023 08-02-2023

(I) Sample collected as per FSA.

(ii) Testing Method followed - Ach & Moliture as per ASTM ID-3582 AS ACU as per ASTM ID-3867-15, I'M as per IS 1359 (Part-II) 1984 Realtheand 2013 (ii) Sulphur(s) value has been put in the lienth colorineter as determined in the laboratory to lowing (ASTM D 4239-18).

(N) None of the experiment is performed by external service provider.

(a) This report should not be replicated or reproduced.

(nt) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Authorited Signatory) CSR-DMFR, RC, AMON (Dr. Madhe Rab)

END OF TEST REPORT



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TC-5897

Analytical results of cost samples collected by CSR-CIMFR (Third Party Sampling) during the period 12.03.2023

LOADING END ANALYSIS REPORT

Date:24-05-2023

Test Report No.-CHAFR/RINC/TPS/RID/MBCC/MAR/2023/64

(i) Sample collected as per FSA.

[HISophurts] value has been put in the bonds calorimeter as determined in the libocotory following (ASTM D 4239-18), 00 Testing Numbed Schlowed - Ash & Mostore as per ASTM 0-7882-15 & GCV as per ASTM 0-5865-10, EM os per IS 1350 (Part-I) 1584 Basellinned 2013

(M) None of the experiment is porformed by external service provider.

(v) This report should not be replicated or reproduced.

(w) The result retained to the sample tested. Reserve part of the sample will be described after these months

CSR-CMFR, RC, RANCH



सीएसआईआर-केदीय खनन एवं ईपल अनुसंपाल संस्थाल अनुसंपाल केद, संची ,पोस्ट- लाजकुस, रांची -834010 CSIR- CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI. 834010



TC-5897

Analytical results of coal samples collected by CSM-CMMFR (Third Party Sampling) during the period 19.06.2022 TO 03.07.2022

LOADING END ANALYSIS REPORT

										Date	Date 06-09-2022	77		
Nam	Treat Nagor No. CMRR/SMC/TRS/BCDM/NRCC/AUN & SILE/2002/21 Name of Cast Company. Central Cost Reid Ltd. Assets Analyticine Assistant		Power Using NTPC-NBCC Date of start of analysis of Product tester - Coal Sam	natysis @p.og2002 Coal Sample					Relative III	Relative Humblity of Monthory Temperature of laboratory:	Printery:	00.0	203K	
				Date of		Railway Rake/MGR *	MGR.	4	Air-dried basis	asis	Equilibra (60	brated moisture (60% RH & 40°C)	Equilibrated moisture basis (60% RH & 40°C)	
15 E	Sample 10	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./F. Note No.	R.R. Date	×	M % ASH %	GCV (Acat/Ng)	WK	ASH%	GCV (kcal/kg)	Analysed Grade **
2	CC1/BALISMATH/NTPC-JV/NABSNAGAR/NBCC/0173/G-11	19-06-2022	03-08-2022	08-08-2022	3285.13	161000535	20-06-2022	7.0	40.9	3753.12	5.2	41.7	3826	612
08		20-06-2022	03-08-2022	08-08-2022	3583.93	141000051	20-06-2022	6.9	41.0	3701.45	5.4	41.7	3761	612
m	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0185/G-11	24-06-2022	05-08-2022	08-08-2022	3952.80	161000541	25-06-2022	6.1	38.0	4123.21	5.7	38.2	4141	611
P	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0280/G-12	03-07-2022	07-08-2022	08-08-2022	2381.80	2381.80 161000549	04-07-2022	1.9	44.6	3504.95	5.7	44.8	3520	613

* Customer Provided Wormstice

**Grade as per the website of the Ministry of cast (www.cost.nic.ley/ensper-statistics/cast-grades, www.cost.grades, 24/major-statistics/cost-grades)

ample collected to per P.M.

pit history Matrock ratiower. An & Materians as per Asthe Dr. Nath. 15 & GCV as por ASTM D-5865-19, DM in per IS 1350 Plack (). 1988 Resiliented 2018 (). ISSE Resiliented 2018 (). ISSE Resiliented 2018 ().

jajūdajāunījū valacības beirs pal in the bomb calonmener as determines in the labo jajī saas of the separiment is performet by enternal service provides.

by This report should not be replicated or reproduced.

(a) The result related to the sample tested. Reserve part of the cample will be destroyed after three months.

(Dr. Madha (M) (Authorited Signatori) CSR-CMFR, RC, RANDH



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 21.06.2022 TO 63.07.2022

LOADING END ANALYSIS REPORT

Report of C	Test Report NoCIMER/INIC/THS/PCBA/NDCC/3UN 8.JUL (7922/19 Namo of Cold Company- Certral Goal Field 144		Power Utility NTPC NBCC Date of start of analysis -7	Power Utility, NTPC-NBCC Date of start of analysis -79.08.2022					Relative HV	Relative Humidity of Interatory Temperature of Interatory.	iboti	3.6	66% 26.8%	- 1
4	Loading Area/Siding GALLMATH		Preduct bested - Cost Sample	Date of	2	Railway Rake/MGR	MGR *	2	Air-dried basis	asis	ging	brated noisture (60% RH & 40°C)	are basis	_
20	Sample ID.	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./F. Note No.	R.R. Dete	* *	ASH %	GCV (kcal/kg)	. A	ASHK	GCV (pcst//g)	4 0
19						To appropriate	12 06 3032	6.0	38.3	3995.29	4.6	38.8	4050	-
1	CC./BALUMATH/NTPC-N/NABINAGAR/NBCC/0177/G-11	21.06-2022	04-08-2022	08-08-2022	415014	151000397	20 00 2000	6.0	38.5	11.080.11	8.8	38.7	4001	_
16	CC./BALUMATH/NTPC-IV/NABINAGAR/NBCC/0178/G-11	22-06-2022	04-08-2022	08-08-2022	4065.20	161000536	23-00-00-02	6.3	44.0	3435.30	9.9	443	3452	_
10	CC./BALUMATH/NTPC-IV/NABINAGAR/NBCC/0181/G-11	23-06-2022	04-08-2022	08-08-2022	4118.00	161000539	7707-90-67	6.0	30.1	4006.23	5.7	38.2	4019	_
	CCI/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0187/G-11	25-06-2022	05-08-2022	08-08-2022	3791.60	161000542	7707-90-97	0.0	20.04	3718 28	8.5	413	3766	
	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0190/G-11	27-06-2022	07-08-2022	08-08-2032	3907.60	161000543	27-06-2022	200	40.7	3710.00	6.6	612	3758	
	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0193/G-11	28-06-2022	07-08-2022	08-08-2022	1704.00	161000544	1000-00-67	1 19	44.6	3435.96	5.3	45.0	3465	
1	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0193/G-12	28-06-2022	07-08-2022	08-08-2022	2150.00		30 04 3039	2 4	40.8	3747.72	63	412	3788	
	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0194/G-11	29-06-2022	07-08-2022	7707-80-90	1562.00	161000548	36.05.2023	6.1	44.7	1441.69	5.3	45.1	3471	
	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0194/G-12	29-06-2022	07-08-2022	08-08-7022	2485.00	161000545	80.06.3033	8 9	41.4	3730.38	6.1	41.7	3758	
	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0196/G-11	30-06-2022	07-08-2022	2702-80-90	3514.30	2010000101	T	6.0	94.9	3446.67	5.4	45.2	3469	
	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0196/6-12	30-06-2022	07-08-2022	08-08-2022	16.999	avendora:	1	6.9	41.3	3717.52	0.9	417	3764	
	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0198/G-11	01-07-2022	07-08-2022	08-08-2022	088.17	161000347	1	19	46.7	1418.66	53	45.1	3448	
	CCL/BALUMATH/NTPC-JV/NABINAGAR/NIICC/0198/G-12	01-07-2022	07-08-2022	7707-80-90	2710.03	101000010	02.02.3033	8.9	41.3	3711.77	5.9	41.7	3748	
	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0199/G-11	02-07-3022	07-08-2022	7707-90-90	3463 10	161000548	1	5	45.0	3407.46	5.2	45.3	3433	
	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0199/6-12	02-07-2022	07-08-2022	7207-90-80	+	TO TO TO TO TO	1	9	41.3	3594 48	6.1	41.7	3776	
1	The state of the s	03.07.2022	07.08-2022	08-0B-2022	1572.40	161000549		0.0		-				1

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07.08-2022

03-07-2022

G12

Analysed Grade **

Date: 31-08-2022

CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0200/G-11 16

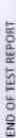
** Grade as part the wehalte of the Ministry of cost bewee

ELOC PROPERTY. 10 Touches Markwood behaved. Auth & Wasserine on par ADTM G-7542-15 & GCV as per ACTM D-5065-15. EM paper Cl. 1930 Protect I 2004-704 \$1.00 to \$1. (i) Sample collected to per PSA.

pathylythesis) which has been part to the bands calconneter as determined to the lobal quicting it a pperformed by automat service provides

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Authorized Surrent Dr.M.C. Service SECURITY.





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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 01.08.2022 TO 08.08.2022

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	343°C	Equilibrated moisture basis (50% RH & 40°C)	GCV (Rcal/kg)	2720	2734	3794	3743	CPUP	4745	4311	****
22		brated noisture (50% RH & 40°C)	ASHK	40.5	40.3	39.6	39.8	36.3	34.4	3.65	-
Date 19-10-2022	y Y	Equilibra (90	M	8.8	9.9	9.9	6.7	7.2	6.9	2.0	200
Date	Relative Hamistry of Laboratory Seriperature of Laboratory	sisse	GCV (Real/kg)	3684.53	3697.70	3744.93	3702.42	4057.01	4204.42	4202 12	1000
20000	Seriperat	Air-dried basis	ASH %	40.1	39.9	39.1	39.4	35.6	34.1	34.4	
		*	ž	7.6	7.5	7.8	7.7	9.1	7.8	8.9	
		AGR.*	R.R. Date	02-08-2022	02-08-2022	03-08-2022	05-08-2022	06-08-2022	07-08-2022	08-08-2022	
		Railway Rake/MGR.*	R.R.No./F. Note No.	161000577	161000578	161000579	161000581	161000582	161000584	161000585	
		~	R.R. Quantity (Mt)	3935.38	4047.80	4025.79	3943.60	4032.34	4015.00	4010.10	
Power Utility- NEPC AIRC Date of survice analysis: 13.30.2022 Product tested. Goal Semple		Date of sample receiving at laboratory		15-09-2022	15-09-2022	15-09-2022	15-09-2022	15-09-2022	15-09-2022	15-09-2022	
			preparation	10-09-2022	10-09-2022	10-09-2022	11-09-2022	11-09-2022	14-09-2022	14-09-2022	
			collection	01-08-2022	02-08-2022	03-08-2022	05-08-2022	06-06-2022	07-08-2022	08-08-2022	
Test Report NoCMRTA/RNC/TPS/NCBM/NBCC/AUS/(2022/29 Name of Cost Consume. Commit Cost East Inc.	Loading Area/Suing SALUMATH		Sample ID	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0279/G-11	CCI/BALUMATH/NTPC-JV/NABINAGAR/NDCC/0281/G-11	CCI/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0283/G-11	CCI/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0290/6-11	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0294/G-11	CCI/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0295/G-11	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0300/G-11	Contract Broading Left constitution
Test Rep	Loading	21	0 A É	1	N		4	2	9	7	•

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Grade **

612 G12 612 611 611 611

**Grade as see the workels of the Markins of cost lower coulois by major statistics, load-grades, were cost governors statistics from grades.

fel fracting Method followed: ARP & Methode as per ACMA D 7582.25 & GCV as per ACMA D-8866-15, BM as per 15 1358 (Per t-0-1984 fearfflowed 2013) [8]Sulphacid value has been put in the loand-calculateries as determined in the laboratory federatory (ACMA D-6215-18).

(i) Sample colocted as per FSA.

(by None of the experiment is performed by external service provides.)

[4] This report should not be replicated or reproduced.

(w) The result related to the sample tooled. Reserve part of the usessis

(Dr. M.K. Saist) (Authorized Signatori) Clats-Covers, IC, PANCHE





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Analytical results of coal samples collected by CSR-CIMFR (Third Party Sampling) during the period 09:09:2022 TO 12:09:3022

LOADING END ANALYSIS REPORT

		sasis	GCV Grade**	4312 610	4
	418 24.2%	orated moisture basis 60% RH & 40°C)			40.6 37
MANE: 43-44-4044	s.v.e	Equilibrated mois (60% RH & 4	M% ASH%		7.0 4
A-010-4	belative Humidity of laboratory.		GCV (scal/kg)	33.4 4377.52	3807.76
	Relative Hum Temperature	Air-dried basis	M% ASH % GCV (scal/kg)	33.4	41.2
	57B E	•	N ×	6.7	5.6
		AGR.*	R.R. Date	09-09-2022	13-09-2022
		Railway Rake/MGR *	R.R.No./ F. Note No.	4045.30 161000596	161000600
		Rai	R.R. Quantity (Mt)	4045.30	4053.10
	NC-MBCK odysis -18.11.2022 José Sample	Date of	sample receiving at laboratory	09-10-2022 14-10-2022	11-10-2022 14-16-2022 4053.10 161000600
	Prower Unitary-NTPC-MBCC Date of start of analysis -18.1. Product tosted - Coal Sample		Date of preparation	09-10-2022	11-10-2022
		See Allega	Date of collection	09-09-2022	12-09-2022
	That Report NoCMFR/RNL/TPS/DCBM/NDCC/NEP/1022/56 Name of Coal Company. Central Coal Field Ltd. Loading Awa-/Siding-BALUMATH		Sample ID	CCL/BALUMATH/MTPC-IV/NABINAGAR/NBCC/0362/G-12	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0370/G-12
	Name of	21	rs é	-	2

* Customer Provided Information

"Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades) Note:

(i) Sample collected as per FSA.

[ii) Testing Method followed - Ash & Motiture as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, IfM as per IS 1350 (Part-I): 1984 Reaffirmed 2013

(iii)Sulphur(s) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4239-18).

(iv) None of the experiment is performed by external service provider.
(v) This report should not be replicated or reproduced.
(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Dr. M.K. Saini)

(Authorized Signatory) CSIR-CIMFR, RC, RANCHI

END OF TEST REPORT



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 07.10.2022 TO 10.10.2022

Date:24-11-2022

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	Analysed Grade **			612	610	612
678 1137C	Equilibrated moisture basis (60% RH & 40°C)	GCV (kcal/kg)	4383	3840	4356	3853
	orated moisture 60% RH & 40°C)	ASHIN	32.6	39.5	32.9	39.3
ratory	Equilibra (60	MMS	7.1	6.3	7.1	6.1
Relative Humidity of laboratory: Temperature of laboratory:	basis	GCV (kcsi/kg)	4462.80	3914.18	4450.12	3918.95
	Air-dried basis	ASH %	33.2	40.3	33.6	40.0
	•	N N	5.4	4.5	5.1	4.5
	MGR.*	R.R. Date	07-10-2022	07-10-2022	10-10-2022	10-10-2022
Pawer Unifory NTPC-NBCC Date of start of analysis -23.11.2022 Product tested - Goal Sangle	Railway Rake/MGR	R.R.No./ F. Note No.	161000608	161000608	161000609	161000609
	Ra	R.R. Quentity (Mt)	1948.00	2098.80	2664.44	1368.26
	Date of	sample receiving at Laboratory	20:10:2022	20-10-2022	20-10-2022	20-10-2022
	The state of the s	Date of preparation	18-10-2022	18-10-2022	18-10-2022	18-10-2022
		Date of collection	07-10-2022	07-10-2022	10-10-2022	10-10-2022
Test Report NoCONTRE/INVC/TPS/BORNA/NBCC/OCT/2002/15 Name of Coal Company. Central Coal Reld Utd. Coaline Invas/Sidom DistUMATH		Sample ID	CCL/BALUMATH/NTPC.IV/NABINAGAR/NBCC/0396/G-11	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0396/G-12	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0397/G-11	CCI/SALUMATH/NTPC-IV/NABINAGAR/NBCC/0397/G-12
Test Rey Nume of	212 🛓		-	2	-	4

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* Customer Provided Information

**Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

(i) Sample collected as per FSA.

[ii] Testing Method followed - Ash & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, EM as per is 1350 (Part-I): 1984 Reaffirmed 2013

(iii)Sulphur(s) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4239-18).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.
 (vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Authorized Signatory) CSIR-CIMFR, RC, RANCHI (Dr. M.K. Saini)

(Authorized Signatory) Con-Court, NC, NAMOR

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TC-5897

Analytical results of coal samples collected by CSR-CIMFR (Third Party Sampling) during the period 17.11.2022 TO 29.11.2022

LOADING END ANALYSIS REPORT

			Action Colors	No.						Date	Date:18-01-2023	10		
The same	The first largest the Could N, MAN, TTPS, MCCONSTRUCT NOW, 72023, 437 The manner of Coal Company - Control Coal Tend Ltd. The Coal Company - Coal Company - Coal Tend Ltd.		Power Utility- NTPC-NBCC Dens of start of assaysts -28.13 Product tested - Coal Sample	Power Utility NTPC-NBCC Dens of start of assiyes -28.12.2022 Product tested - Cast Sample	N			VV040	Retative Hu	Relative Humidity of laboratory.	Shop		37%	
213				Date of		failway Rake/Netse *	* HOW		Air-dried basis	3555	Equilibra (60	SON RH & 40°C)	Equilibrated moisturn basis (60% RH & 40°C)	
Si €	Semple ID	Date of collection	Date of preparation	sample receiving at taboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	2 %	ASH %	GCV (hcal/hg)	Mik	ASHTA	GCV (hcat/hg)	Analysed Grade **
+4	CCL/BALLMATH/NTPC-JV/NABINAGAR/NBCC/0453/G-11	17-11-2022	20-11-2022	22-11-2022	4063,90	161000633	17-11-2022	3.7	46.3	3476.55	5.9	45.2	3397	614
r	CCL/BALLDMATH/NTPC-JV/NABINAGAR/NBCC/0462/G-11	23-11-2022	30.11-2022	05-12-3022	3968.25	161000637	23-11-2022	6.2	38.1	3944.43	6.5	38.0	3932	612
m	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0463/G-11	24-11-2022	30-11-2022	05-12-2022	4062.30	161000638	25-11-2022	6.1	38.0	3982.60	9'9	37.8	3961	612
4	CCL/BALUMATH/NTPC.3V/HABIMAGAR/NBCC/0464/G-11	25-11-2022	30-11-2022	05-12-2012	4063.90	161000639	256-11-2022	63	39.0	3868.33	6.6	38.9	3888	612
*	CCL/BALLIMATH/NTPC-JV/NABINAGAR/NBCC/0465/G-11	27-11-3022	30-11-2022	05-12-2022	4118.00	161000640	27-11-2022	6.1	38.6	3945.01	6.5	38.4	3928	612
9	CCL/BALUMATH/MTPC-JV/MABINAGAR/NBCC/0467/G-11	29-11-3022	30-11-5055	05-12-2022	4118.00	161000642	30-11-2022	5.8	38.2	3982.17	6.8	37.8	2040	612

6. Sample coldschot as per 174. pp. Fosing Worthard Subaweri - Auft 6. Webinson as per AVINO D 1742-17. (Alfoughturis) value has been pat in the Cuerts collectences as discover.

are as per ARDN D-2532-11 E. GOV so per ACTM D-3815-15, this as yer-3-1350 (heat-1), 1984 fausthormed #513 this obtained to as describind in the beforecovy following (ASTM 9-429-18).

(iii) Noise of the majoriment to performed by asternal vanics prouder.

(v) This repail should not be equivaled to improduced.

(vi) The result related to the sample tening Relative part of the sense.

END OF TEST REPORT





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Analytical results of coal samples collected by CSSR-CIMFR (Third Party Sampling) during the period 29.12.2022 AND 30.12.2022

LOADING END ANALYSIS REPORT

Date 22.02.2023

214

4 00	3 00	2 00	1 00	2	<u> 7</u>	Name of Coal Loading Area/
CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0505/G-11	/BALUMATH/MTPC-JV/NABINAGAR/NBCC/0504/G-11	CCL/BALUMATH/WTPC-JV/NABBNAGAR/NBCC/0503/G-11	CCL/BALUMATH/WTPC-JV/NABINAGAR/NBCC/0502/G-11	Sample ID		Test Report NoCIMER/Res//TRS/9/CIM/NBCC/ DISC/2002/53. Name of Coal Company: Control Coal Field (Ltl. Loading Area/Saling-BALUMATH
30-12-2022	29-12-2022	29-12-2022	29-12-2022	collection		
31-12-2022	31-12-2022	31-12-2022	31-12-2022	preparation		Product second - Coal Sample Product second - Coal Sample
04-01-2023	04-01-2023	04-01-2023	04-01-2023	receiving at laboratory	Date of	twee Utility- NTPC-NBCC arts of start of analysts -13.02.3023 roduct twosel - Coal Sample
4040.20	4064.56	4075.13	4061.00	Quantity (Mt)		2
141000064	161000661	161000660	161000659	R.R.No./ F. Note No.	Railway Rake/	
	30-12-2022	29-12-2022	29-12-2022	R.R. Date	ke/MGR*	
4.2	4.1	4.1	4.2	M ×		
40.6	40.2	40.6	39.8	ASH %	Air-dried basis	Relative H Temperah
3850.49	3905.52	3886,94	3947.81	GCV (hcal/hg)	basis	Relative Humidity of laboratory: Temperature of laboratory:
6.4	6.4	6.1	6.9	NO.	Equilibr (6)	d laboratory: dratory:
39.7	39.2	39.8	38.7	ASHO	60% RH & 40°C)	
3762	3812	3806	3837	GCV (hcal/hg)	Equilibrated moisture basis (60% RH & 40°C)	NAM NAS
612	GL2	612	612	Analysed Grade ***		

[0] Testing Method followed - Ash & Molsture as per ASTM D-7502-15 & GCV as per ASTM D-5865-13, EM as per IS 1350 (Part-I): 1984 Realfirmed 2013

(III)Salphur(s) value has been put in the bomb calorieseter as determined in the laboratory following (ASTM D 4259-15).

(Authorised Signatory) CSIs-CIMFS, RC, RANCH

(Dr. M.K. Saint)

^{**}Crade as per the website of the Ministry of coal (www.coal.nic.ht/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

⁽i) Sample collected as per FSA.

⁽by) None of the experiment is performed by obtainal service provides.

⁽v) This report should not be replicated or reproduced.

[[]M] The result related to the sample tested. Reserve part of the sample will be destroyed after three months.



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TC-5897

Analytical results of cost samples collected by CSIR-CIMFR (Third Party Sampling) during the period 97.01.2023 TO 10.01.2023

LOADING END ANALYSIS REPORT

Date:03-03-2023

	2 6		1		§ 2		to the	aul Report
COLUMN THE NATIONAL PROPERTY OF THE PROPERTY O	CCL/BALUMATH/NTPC-JV/NABINAGAN/NPCL/VDCJ/VC-LL	Contract of the second	CCL/BALLIMATH/NTPC-IV/NABINAGAR/NBCC/0518/G-11		Sample ID		ing Area/Siding BALUMATH	and Respect No Child Rythol/Tox/(BCBM/NBCC/LAN/2003/53)
10-01-2023	- C. C. C. C. C. A.	10.05.7023	07-01-2023		Date of collection			
11-01-2023		11-01-2023	C303-10-11 5707-10-10	24 04 0003	Date of preparation		Product tested - Coal Saraple	Date of start of analysis -21
14-01-2023		14-01-2023	TALAS.	14.01.3033	sample receiving at laboratory	Date of	Coat Sample	Power Utility NEPC-MISC. Date of start of analysis -28.09.2023
4933.90		4115.40	1000000	4070.57	R.R. Quantity (Mt)		1	-
COGNINTER	assources.	4115.40 161000668		161000566	R.R.No./ F. Note No.	Railway Rake/MGR *		
The Paris	10.01.003	10-01-2023		07-01-2023	R.M. Date	WGR *		
919	3.6	3.0		3.7	ž X			
	39.6	27.3	300	48.5	ASH %	Air-dried bas		Relative No.
-	4070.35	4080,00	020000	3170.89	GCV (kcal/Ag)	1980		as Humblify of laboratory:
	6.4	0,4	6.7	5.4	3	(60	Equilibra	story
	38.4	2000	38.6	47.6	ASHX	60% RH & 40°C)	ited moist	~ ~
THE STREET	3952		1971	3115	GCV (kcal/kg)	0,0	ture basis	3,23
	710		612	614		Analysed 215		

218:

(i) Sample collected as per FSA.

(Dr. M. K. Saint) (Authorised Signatory)

^{*} Costomer Provided Information

^{**}Grade as per the website of the Ministry of coal (www.coal.sic.in/major-statistics/coal-grades, www.inat.gov.in/major-statistics/coal-grades)

⁽RISulphurit) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4239-18). (iii) Testing Method followed - Ach & Moosture as per ASTM D-7582-15 & GCV as per ASTM D-5865-13, TM as per IS 1550 (Part-I): 1864 Resellenced 2013

⁽iv) None of the experiment is performed by external vervice provider, (v) This report should not be replicated or reproduced.

⁽w) The result related to the sample bested. Reserve part of the sample will be destroyed after three months

(Authorized Signatury) CSR-CIMIN, NC, BANCH

(Dr. M. K. Salet)

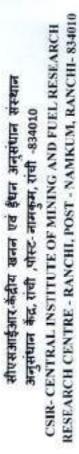


219 ysed fe ::

390%

Relative Hamility of laboratory:

Date:17-03-2023





TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 08.01.2023 TO 18.01.2023

LOADING END ANALYSIS REPORT

Test Report NoCNRFR/RNC/TPS/BCBN/NECC/LAN/2023/54 Name of Coal Company. Commit Coal Held Ltd. Loading Aves/Skilog &n. UMMTH		Prover Utility-NT Date of start of a Product tested	PC-NBCC nalysis -03,01,302 Coal Sample	3403		
210	24.000	100 100 100	Date of		allway Rake/N	MGR.*
Mo. Sample ID	Date of collection	Date of preparation	sample receiving at	R,R	R.R.No./F.	1

Sture b		GCV Grade	(Bx/sex	-	-					3121 G14 3499 G13 3280 G14 3874 G12
	99)	MAS		2	5.4	20	2 2 2	22 22 23	2 2 2 2	2 2 2 2 2
Equili MPS		GCV (Real/hg)	S.C.C. 200	3178 84	3178.84	3178.84	3550.17	3178.84 3550.17 3335.97	3178.84 3550.17 3335.97 3965.26	3178.84 3550.17 3335.97 3965.26
25		ASH %		48.8	48.8	48.8	48.1	48.1	48.3 48.1 40.3	48.3 48.1 40.3
No.		8		3.7	3.7	12	2 2 2	33 83 14	2 8 2	28 8 13 13
Alt-dried basis ASH X GCV		R.R. Date		09-01-2023	09-01-2023	09-01-2023	09-01-7023 14-01-7023 16-01-7023	09-01-2023 14-01-2023 16-01-2023 16-01-3023	09-01-2023 14-01-2023 16-01-2023 16-01-2023	09-01-2023 14-01-2023 16-01-2023 17-01-2023
Air-dried basis A: Date M % ASH % Breat/or		R.R.No./F. Note No.		161000667	161000667	161000670	161000667 161000670 161000671	161000667 161000671 161000672	161000667 161000670 161000671 161000672	161000667 161000671 161000672 161000673
Air-dried basis A: Date M % ASH % Breat/or		R.R. Quantity (Mt)		4068.41	4068.41	4068.41	4068.41 4061.00 4035.86	4068.41 4061.00 4035.86 4038.80	4068.41 4061.00 4035.86 4038.80	4068.41 4061.00 4035.86 4038.80 4038.80
R.R.No.J.F. R.R. Date M.% ASH % Real/lot	sample	receiving at laboratory		14-01-2023	14-01-2023	20-01-2023	14-01-2023 20-01-2023 20-01-2023	14-01-2023 20-01-2023 20-01-2023 24-01-2023	14-01-2023 20-01-2023 20-01-2023 24-01-2023	14-01-2023 20-01-2023 20-01-2023 24-01-2023 24-01-2023
R.R. R.E.No., F. R.R. Date M.% ASH N. Brailfold	Date of	preparation		11.01.2023	11.01.2023	11.01.2023	11.01-2023 16-01-2023 16-01-2023	11.01.2023 16.01.2023 16.01.2023 20.01.2023	11.01.2023 16.01.2023 16.01.2023 20.01.2023	11.01.2023 16-01.2023 16-01.2023 20-01.2023
R.R. R.E.No., F. R.R. Date M.% ASH N. Brailfold	Date of	collection		08-01-2023	08-01-2023	14-01-2023	08-01-2023 14-01-2023 15-01-2023	14-01-2023 14-01-2023 15-01-2023 16-01-2023	08-01-2023 14-01-2023 15-01-2023 16-01-2023	08-01-2023 14-01-2023 15-01-2023 16-01-2023 17-01-2023
Date of sample R.R. R.No./ F. R.R. Date M.% ASH M. Real/lost Broad/lost		osumbe ID		CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0520/G-11	CCL/Balumath/NTPC-IV/NaBINAGAR/NBCC/0520/G-11	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0520/G-11 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0523/G-11	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0520/G-11 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0523/G-11 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0526/G-12	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0520/G-11 CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0523/G-11 CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0526/G-12 CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0528/G-11	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0520/G-11 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0523/G-11 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0528/G-12 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0528/G-11	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0520/G-11 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0523/G-11 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0526/G-12 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0528/G-11 CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0528/G-11
	COURT POLICE CO.	Date of Date of Sample	Date of sample R.R. R.R.No./F. R.R.Date M % ASH % (kcal/kg) MM% ASH % (kcal/kg) MM% ASH % (kcal/kg)	Date of Date of sample R.R. R.R.No./F. R.R. Date M % ASH % (kcal/kg) MMS ASH% (kcal/kg) (kcal/kg	Date of Date of sample R.R. R.R.No./F. R.R. Date M% ASH % GCV MMS ASH % GCV (Real/Ag) (Real/Ag) (Real/Ag) (Real/Ag) (Real/Ag) (Real/Ag) (Real/Ag) (Real/Ag) (Real/Ag)	Date of Date of sample R.R. R.R.No./F. R.R. Date M % ASH % GCV MMS ASH % (kcal/kg) R.H.S. GCV MMS ASH % (kcal/kg) R.H.S. Date M % ASH % (kcal/kg) MMS ASH % (kcal/kg) R.H.S. Date M % ASH % (kcal/kg) MMS ASH % ASH % (kcal/kg) R.H.S. Date M % ASH % (kcal/kg	Date of Date of Sample R.R. R.R.No./F. R.R. Date M % ASH % GCV MMS ASH % (kcal/kg) (kc	Date of Date of Sample R.R. No./F. R.R. Date M % ASH % GCV MMS ASH% (Cal/kg) MMS ASH % (C	Date of pate of pate of sample receiving at laboratory R.R. No.J.F. R.R. Date of solutions R.R. No.J.F. R.R. Date of solutions R.R. No.J.F. R.R. Date of solutions M.S. ASH N. RCAJ/LRS GCV RMS ASH N. RCAJ/LRS GCV RMS ASH N. RCAJ/LRS GCV RMS ASH N. RCAJ/LRS GCV RCAJ/LRS ASH N. RCAJ/LRS ASH N. RCAJ/LRS GCV RCAJ/LRS ASH N. RCAJ/LRS GCV RCAJ/LRS ASH N. RCAJ/LRS ASH N. RCAJ/LRS ASH N. RCAJ/LRS GCV RCAJ/LRS ASH N. RCAJ	Date of Loberton preparation receiving at Laboratory (Art) R.R.No./F. R.R. Date Ms. ASH Ms. GCV ASH Ms. GCV Mr/s ASH Ms

Customer Provided Information

** firste as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades

(i) Sample collected as per Fish.

(ii) Testing Method followed - Ash & Meistern as yer ASTM 0-7582-15 & GCV as per ASTM 0-3865-12, IM as per II: 150 (Fart-II: 1984 Reaffamed 2013 (Hist-III) value has been part in the bomb cah christer as leterasteed in the lateratory following (ASTM 0-4229-18).

(iv) Note of the experiment is performed by extental service provides

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 23.03.2023

LOADING END ANALYSIS REPORT

Date:05-04-2023

SEPORT NO. CHAFR/RING/TPS/BCBA/NBCC/JAM/2023/96	Power Utility- NTPC-NECE
ame of Coal Company. Central Coal Held Ltd.	Date of start of analysis -02:04:2023
antina Area Stitles and UMATH	Product Insterl - Coal Semple

Name o	Coal Company Central Coal Held Ind.		Date of start of analysis -0. Product tenter - Coul Sam	Date of start of analysis -02:04.2023 Product tested - Coal Sample				000	Relative Hur Temperatur	Relative Humidity of Isbaratory. Temperature of Isbaratory.	satisfy.		4455 25.27C
				Date of	æ	tailway Rake/MGR *	MGR *	•	Air-dried basis	nis	Equilibra (60	quilibrated moisture (60% RH & 40°C)	ure basis 0'Cl
☆ 훈 21	Sample ID	Date of collection	Date of preparation	Date of sample preparation receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	×	ASH %	M % ASH % GCV (Ng)		MYS ASHTS (kcal/kg)	GCV (kcal/kg)
7.	CCL/BALLIMATH/NTPC-IV/NABINAGAR/NBCC/0539/G-11	23-01-2023	02-02-2023	08-02-2023	3970.00	161000681	3.01.2023 02-02-2023 08-02-2023 3970.00 161000681 23-01-2023 4.2 39.8 4021.68 5.3 39.3 3976	4.2	39.8	4021.68	5.3	39.3	3976

(il Sample colorised as per PM).

Jul Teachy, Matched federwell - Anh & Montiere as per AVTN, D-7882-15 & GCV as per AVTN D-2885-19. DN ms per IS 1258 Part II; 3584 Resiffrence 2015

Jul Sudphartis when has been put in the bands calcrimeter as determined in the laboratory federwell (AVTN D-4289-34).

*Stade as per the website of the Ministry of coal (www.coal.orc.in/major-statestycost-grades, www.coal.gov.ny/major-statestycoal-grades)

(h) Name of the asperiment is performed by external service provides.

(v) This report should not be replicated to reproduced.

(w) The result related to the sample testini. Reserve part of the sample will be destroyed after three meet's



220

19

612

Analysed Grade **



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 06.02.2023 TO 09.02.2023

LOADING END ANALYSIS REPORT

cading Are	Normal of Coal Company. Central Coal Field Ltd.		Power Utility- NTPC-NBCC Date of start of analysis -11.0 Product Nested - Cost Serspie	Fower Utility- MTPC-ABCC Date of start of enalysis -31.04.2023 Product tested - Coal Semple					Relative Humidity of	Refailive Humidity of Jabon	Fibbretony:		473	
5			The state of the s	Date of	•	Saliway Rake/MGR	MGR *		Air-dried basis	asis		Equilibrated moisture basis	ure basis	
	Sample ID	Date of	Date of	sample							100	(60% RH & 40°C)	0,0	
NO.		collection	preparation	receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	ž	ASH %	GCV (kcsi//kg)	N.	ASH%	GCV (kcal/he)	Analysed Grade **
1	CCI/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0546/G-11	06.00.3033	13.03.5030	1		-	- Annie Control of the last		Proposed A					
2	CI /RAILIMATE MATER WATER CO. C.		43.05-5043	10-02-2023	2220,80	161000682	06-02-2023	3.0	47.3	3334 46		1	1	
8	THE STATE OF THE S	06-02-2023	13-02-2023	16-02-2023	1730.80	161000683	06.00.3033	0,		071400	6.0	60.0	3247	614
	CCL/BALUMATH/NTPC-JV/NABINAGAR/NBCC/0548/G-11	07-03-3033	14.03 5031	40.00		***************************************	6202.30.00	9.6	43.2	3664.97	6.9	41.9	3554	643
4	CCURALIBIATH/MIPC.IV/MARMAGAR/Marchines to as		200.200.40	10.05-2023	4055.90	161000683	07-02-2023	4.2	37.2	6181 40	2.0	0.00		200
1	TO THE PARTY OF TH	08-02-2023	15-02-2023	16-02-2023	4057.10	161000684	00.03 3039				*	96,0	4042	611
0	CCL/BALUMATH/NTPCJV/NABINAGAR/NBCC/0552/G-11	09-02-2023	15-02-3022	Ľ	ANEMAN	10000000	6900.00		38.0	411117	6.7	37.1	4012	611
Cheff	Codomic Provided Information		-	1	+020.10	161000685	10-02-2023	42	39.6	3958.34	6.5	38.6	2663	2000

"Grafe as per the website of the Ministry of casi Gowa confine infresjor statisting leading, www.conf.gov.in/major-statisting/head-greens)

[Dr. M.X Sales] [Matherined Signatory] GSR-CWITE, RC, RANCH

il Sample collected as per FSA.

FOR THE MATERIA SAID WELL AND MATERIA SE SELVEN IN THE MATERIA SELVEN IN A SERVEN IN A SERVENT SERVEN SERVE

NY Note of the experiment is perfumed by external service provides.

(v) This report should not be replicated or reproduced.

(vi) This report should not be replicated or reproduced.

(vi) The result indiced to the lampit tested. Reserve part of the service will be deproyed after share manity.



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 15.02.2023 TO 17.02.2023

LOADING END ANALYSIS REPORT

Date:24-04-2023

1 CCL/BALL		No.	CONTRACTOR CONTRACTOR	Test Report No. CIMHI/MAC/TPS Name of Coal Company. Central Loading Area/Siding-BALLIMATH			
	CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0558/G-12	Sample ID		per noChien/RedC/TPS/IRCBM/NBCC/FEB/2823/58 Coal-Company Central Coal-Red Ltd. Area/Siding-BALLMANTH			
17-02-2023	15-02-2023	collection	0.000				
21-02-2023	21-02-2023	preparation		Power Utility- NTPC NBCC bare of start of analysis -3 Product tested - Coal Sain			
24-02-2023	24-02-2023	receiving at laboratory	2 2				
4087.29	3884.70	Quantity (Mt)					
161000687	161000686	R.R.No./ F. Note No.	Railway Rake/MGR *				
17-02-2023	16-02-2023	R.R. Date	AGR .				
3.0	3.2	8	25				
39.5	38.7	ASH %	Air-dried bash	Relative H Temperatu			
4143.75	4197.00	GCV (kcal/kg)	sasis	unidity of labora are of laboratory			
gi,	6.9	3	Equilibr	igran			
38.0	37.2	ASHN	(60% RH & 40°C)				
3981	4037	(kraf/kg)	moisture basis H & 40°C)	3,952			
G12 21	611	Grade **					

CSIR CHAFR, N.C., RANCH (Authorized Signatory) (DI, M.K. SHIRL)

(a) The result related to the sample insted. Reserve part of the sample will be destroyed after these records

(iii) Tasting Mathed followed - Aph & Mobiliars as per ASTM D-7581-15 & OCV as per ASTM D-4866-14, EM as per 6 1850 (Part O: 1584-Baseffirmed 2013

"Grade as per the website of the terretory of coal (www.issat.es.) in the previous destricts and the perfect present of the perfect perfect present of the perfect perfect

16 Sample colorcted as per 65A.

(iii) helphor(s) value has been pat in the bomb calorimeter as determined in the suboratory full owing (ACTM D 4219-18).

(x) That report should not be replicated or reproduced (N) Name of the experiment is performed by external service provider.



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 06.03.2023

LOADING END ANALYSIS REPORT

Date:15-05-2023

		Date of start of snalysts -11.6 Product terrind - Coal Sarrigh	Date of start of analysis 11.05.2023 Product insted - Coal Sample		200				Relative Hy Terriperatu	Relative Humidity of laboratory Temperature of laboratory	ty of laborat	y of laboratory: laboratory: Equilibrated mo	ty of laborat
_			Date of		Railway Rake/MGR *	MGR *	28	-	r-dried I	Air-dried basis		Equilibrated mo	Equilibrated mo
	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	×		N HSV	ASH'S (kcal/kg)	GCV MIS	GCV MIS	GCV M%
	06-03-2023	19-03-2023	20-03-2023	-	161000688	06-03-2023	3.2		35.2				4375.49 5.6 35.3
NG-11	06-01-2023	19-03-2023	20-03-2025	_	3958.70 161000689	06-03-2023	3.4		35.5	35.5 4405.72		4405.72 5.5	4405.72 5.5

₹ ¥

Coading Area/Sidny-BALLIMATH Nume of Coal Company- Central Coal Field Ltd.

Text Report No. COMERCHINC/TES/NCHM/NBCC/MAR/2023/TB

() Sample collected as per FSA.

Customer freshided transcours

*Grade as per the website of the Ministry of coal forwar coalcast infinage statist

CCL/BALUMATH/NTPC-IV/NABINAGAR/NBCC/0570/

Fig Training Medical Politiowed: Auth & Majorius on per ASTINI IN 1982-15 & GEV as per ASTINI IN-5860-15, EM as per IS 1596 Part-II 1594 Repliktment 2013 Hittelyster ()) value has been put in the bands calatinates as determined in the laboratory following (ASIMID 4219-18).

(v) This report should not be replicated or reproduced. (v) None of the experiences is performed by external service provider.

(vi) The result related to the sangle lested. Asserve part of the sample will be dect

CSS-CIMEN, NC, NAMOR Overgraphs year, emptyl) (Dr.M.K. Said)

220



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 14.03.2023 TO 16.03.2023

LOADING END ANALYSIS REPORT

Date:23-05-2023

SI. Sample ID 1 CCL/BALUMATH/NTPC-IV/WASHWAGAR/WSCC/0573/G-11 2 CCL/BALUMATH/NTPC-IV/WASHWAGAR/WSCC/0573/G-11	No. Sumple ID 1 CCL/BALUMATH/NTPC-JV/NASINAGAS/WSCC	No. Sample ID			Text Separt No. CINER/MINC/TEX/INCHM/MINC/FMAN/2002/66. Marine of Cool Conquery: Correlal Cool Field Ltd. Looking Reso/Stding-BALL/MAKIH
580/G-11 16-03-2023	-	1	collection	98	
1	3 27-03-2023	3 27-03-2023	Date of preparation		Power Scilley, MTHC-MBCC Date of start of available 20 Product tested - Cold Sarroy
П	31-03-2023	31-03-2023	receiving at laboratory	Date of	wer celley 1879C-188CC lete of start of analysis (20,0%,2022) other? tested - Coal Sarright
ds bilbs	4048.60	3802.12	GMI)		
10000000	161000094	161000693	R.R.No./F. Note No.	tallway Rako/	
8406 RU PL	16-03-2021	14-03-2023	H.H. Date	MGR *	
25	2.4	2.3	N N		i.
40.0	T.66	36.2	ASH #	ir-dried t	nelative Hy Temperatu
4061,44	4142.84	4653.04	(#cs//kg) A39	osis	esdey of labour
0.0	8.8	6.2	5	Equilibra (60	-
38.5	37.1	34.8	YSHX	ated moisture ps, RH & 40°C	
3914	3956	4275	8.	NO.C.	3,872
612	612	2	21		

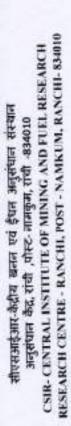
** Grade as per the website of the Ministry of cool (www.cool.nic.m/make staristics/cool.grades, www.cool.gov.h/make-staristics/cool.grades)

10 Sample collected as per ESA.

(A) Testing Michod followed - Adh 6 Maintaine as por ASTM D-7580-LS & GCV as per ASTM D-3605-15; EM as per IS LSS6 (Part-I): 1964 Resillationed 2013 (ROSa (phints)) calve has bronn put in the bounk calorinoster as determined in the Laboratory following (ASTM D 4235-18).

(iv) Above of the experiesest to performed by extérned service provider, (v) This report should not be registated or reproduced.

(Authorized Signature) III. WOUND





TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 15.04.2022 to 18.04.2022

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Date:24-05-2022	Relative Humidity of laboratory: 47% Temperature of laboratory: 27.3°C	Air-dried basis basis (60% RH & 40°C)	GCV M% ASH% (kcal/kg)	3854.96 5.9 40.8 3787	4192.94 5.2 37.1 4136	6.4 38.3	9 5.0 44.0 3556
	0.00		GCV M% ASH% (kcal/kg)	5.9	5.2	6.4	2.0
	Relative Humidity of laboratory: Temperature of laboratory:		GCV M%				4
	Relative Humidity of labor Temperature of laborate	Air-dried basis	GCV (kcal/kg)	3854.96	12.94	35	
	Relative H Temperati	Air-dried	2º.		415	3949.35	3597.09
		4	ASI	4.2 41.5	37.6	39.1	44.5
			M % ASH %	4.2	3.9	4.5	3.9
		* 85	R.R. Date	15-04-2022	18-04-2022	18-04-2022	18-04-2022
		Railway Rake/MGR *	R.R.No./ F. Note No.	161000779	161000780	161000780	161000780
		Ra	R.R. Quantity (Mt)	1549.46	2615.41	651.20	628.88
ABOC	ilpris -09.05.202	Date of	sample receiving at laboratory	23-04-2022	23-04-2022 2615.41 161000780	23-04-2022	23-04-2022
Process Unified ATPC-MBCC	Date of start of analysis -09.05.2022 Product tested - Coal Sample		Date of preparation	18-04-2022 23-04-2022 1549-46 161000779	19-04-2022	19-04-2022 23-04-2022 651.20	19-04-2022
			Date of collection	15-04-2022		18-04-2022	18-04-2022 19-04-2022 23-04-2022 628.88 161000780 18-04-2022 3.9 44.5 3597.09
TAX COMPANY STATE OF	Test Repart NoCIMPR/RNC/TPS/NDI/MRCC/APS/2022/04 Name of Coal Company Company Coal Held Ind.	Integral Section Section from Account	Sample ID	CCI /KDH/MTPC-IV/NABINAGAR/NBCC/0007/G-13	CCI JKDH/MTPC-IV/NABINAGAR/NBCC/0009/G-11	CCL/KDH/NTPC-JV/NABINAGAR/NBCC/0009/G-12	CCL/KDH/NTPC-IV/NABINAGAR/NBCC/0009/G-13
	Coal Com	MICH S		8	1	100	CCL

Anelys C

* Customer Provided Information

**Grade as per the website of the Ministry of coal (inwe-coal-risciin/major-statistics/coal-grades), www.coal.gew.in/major-statistics/coal-grades)

Mote

(i) Sample collected as per FSA.

(ii) Testing Method followed - Ash & Maisture as per ASTM D-1542-15 & GCV as per ASTM D-5165-19. EM as per IS 1350 (Part-I): 1964 Reaffirmed 2013 (Highdpfur(s) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 42/9-18).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.
 (vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Dr. M.K. Saint)

CSIR-CRAFR, RC, RANCHI (Authorized Signatury)

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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 04.05.2022

LOADING END ANALYSIS REPORT

Date:31-05-2022

226 (kcal/kg) 4786 3436 4137 basis (50% RH & 40°C) SS Equilibrated moisture ASH% 36.4 45.4 28.5 MASS 5.6 6.5 5.2 Relative Humidity of laboratory: Temperature of laboratory: (kcal/kg) 4233.40 3522.91 4929.21 9 Air-dried basis M % ASH % 37.2 46.5 29.4 2087.80 161000789 05-05-2022 3.4 3.7 2.8 161000789 05-05-2022 05-05-2022 R.R. Date Railway Rake/MGR * 1910.00 161000789 R.R.No./F. Note No. Quantity 69.90 (Mt) Date of start of analysis -24,05,3022 10-05-2022 06-05-2022 10-05-2022 10-05-2022 receiving at (aboratory Date of sample Product tested - Coal Sample POWER UTILITY-MTPC-NBCC 06-05-2022 06-05-2022 preparation Date of 04-05-2022 04-05-2022 04-05-2022 collection Date of CCL/KDH/NTPC-JV/NABINAGAR/NBCC/0025/G-10 CCL/KDH/NTPC-JV/NABINAGAR/NBCC/0025/G-13 CCL/KDH/NTPC-JV/NABINAGAR/NBCC/0025/G-11 Test Report No.-CIMFII/RNC/TPS/NDH/NBCC/MAY/2022/03 Sample 1D Name of Coal Company. Central Coal Field Ltd. Loading Arra/Siding-KDH (NK Area) 223 -7 m

613 115 8

(Authorized Signatory) CSIR-CIMITR, RC, RANCH (Dr. M.K. Saint) 100

* Customer Provided Information

**Grade as per the website of the Ministry of coal (www.coal.nic.In/major-statistics/coal-grades, www.coal.gov.In/major-statistics/coal-grades)

(i) Sample collected as per FSA.

(iii) Testing Method followed - Ach & Mohiture as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, (IM as per IS 1350 (Part-I): 1984 Reaffirmed 2013

(id)Sulpharis) what has been put in the bomb calonimeter as determined in the laboratory following (ASTM D 4239-18).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 01.01.2023

LOADING END ANALYSIS REPORT

2-2023		1	2 Production of the control of the c	611	612	
Date:28-02-2023	36% 75.6°C	ure bask	ASHN (Kcal/kg)	4103	1796	
۵	E 22	ibrated moisture (60% RH & 40 C)	ASHX (37.3 4103	39.4	
	ratory:	Equilibrated moisture besis (60% RH & 40 C)	NA.	5.7	6.5	-
	Relative Humidity of laboratory: Temperature of laboratory:		M % ASH % (kcal/kg)	4159.11	4012.75	40000
	Relative Humidity Temperature of it	Air-dried basis	ASH %	37.8	30.0	99.00
	-	A	8	4.4	4.5	2
		GR.	R.R. Date	04-01-2023	200 at 2000 at 2000	01-01-6063
		Railway Rake/MGR *	R.R.No./ F. Note No.	161000396	2000000000	-1
		E.	R.R. Quentity [Mt]	1146.30	200000	10/0.10
	NBCC hpis -25.02,2023 31 Seculo	Date of	sample receiving at laboratory	SCOR 140 00	2000	09-01-2023
	Power utility-NTPC-NBCC Date of start of analysis -23.02.2023	Date o	50.783	11.9219 8.4 37.8 4.4 37.8 4159.11	C207.T0-90	06-01-2023 09-01-2023 1070.10
			Date of Date of collection preparation	00000000000	01-01-0753	01-01-2023
	Test Report NoCOMFR/SML//TPS/KDH//NECC/JAN//3023/06 Name of Cost Company - Cottof Cost Field Ltd.	confing Americating KDH INE American	Sample ID		CCL/KDH/NTPCJV/NABINAGAR/NBCC/0194/G-11 01-01-02-023	CCI /KDH/NTPC-IV/NABINAGAR/NBCC/0194/G-13 01-01-2023 (
	Test Repo	toaging	ਖ <u>ਝੰ</u> 224		1	-
			224			

227

**Grade as per the existic of the Ministry of coal (www.com.nr.in/major-statistics/coal-grades) Customer Provided Information

(ii) Tusking Nethod Solowed 1 Ash & Molture as per ASTM D-7582-15 & GCV as per ASTM D-1865-15, EM as per is 1200 [Part II] 1984 Realfilmed 2013

(i) Sample collected as par 154.

(illouphoris) value has been put in the bomb calorimeter as desterwined in the inburstory following (ASTM D 4225-LB).

(N) Name of the experiment is performed by external service provider.

(A) The reach related to the sample tested. Reserve part of the sample will be distributed ofter three muritia. (v) This report should not be replicated or reproduced.

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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 01.03.2023

LOADING END ANALYSIS REPORT

Power Utility-NTPC-NBCC

Test Report No.-CIMFR/RNC/TPS/KDH/NBCC/MAR/2023/07

Relative Humidity of laboratory: 52%

Date:03-05-2023

	2		228		Name
* Customer Provided Information	CCL/KDH/NTPC-JV/NABINAGAR/NBCC/207/G-13	CCL/KDH/NTPC-IV/NABINAGAR/NBCC/207/G-11	Sample ID		Name of Coal Company - Central Coal Field Ltd. Loading Area/Siding KDH (NK Area)
	01-03-2023	01-03-2023	Date of collection		
	01-03-2023 04-03-2023 07-03-2023 1120.10 161000892 01-03-2023	04-03-2023	Date of preparation		Date of start of analysis -27.04.2023 Product tested - Coal Sample
	07-03-2023	07-03-2023	sample receiving at laboratory	Date of	nalysis -27.04.202 Coal Sample
	1120.10	tiple R.R. sing at Quantity attory (Mt) -2023 2907.60		29	
	161000892	2907.60 161000892	R.R.No./ F. Note No.	Railway Rake/MGR *	
	01-03-2023	01-03-2023	R.A. Date	AGR *	
	3.4	4.0	×		
	41.9	38.9	M % ASH %	Air-dried basis	Relative
	3910.07	3977.85		basis	Relative Humidity of laboratory: Temperature of laboratory:
	6.6	7.1	MX	Equilibra (60	dratory:
	40.5	37.6	ASHN	[60% RH & 40°C]	
	3781	3849	-	Equilibrated moisture basis (60% RH & 40°C)	25.0°C
	27.0	G12	0.2		

(iv) None of the experiment is performed by external service grovider.

CSIR-CHAFR, RC, RANCHI (Authorized Signatory) (Dr. M.K. Saint)

^{**}Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

⁽i) Sample collected as per FSA.

⁽II)Sulphur(s) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4239-18). (ii) Testing Method followed - Ash & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-5965-19, EM as per IS 1350 (Part-I): 1984 Realfirmed 2013

⁽v) This report should not be replicated or reproduced.

⁽w) The result related to the sample bested. Reserve part of the sample will be distroyed after three months.



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 09.03.2023 TO 10.03.2023

LOADING END ANALYSIS REPORT

Power Utility-NTPC-MBCC

Relative Hurridity of laboratory: NES .

Date:08-05-2023

4	2				2	2	9	Test Res
CCL/KDH/NTPC-JV/NABINAGAR/NBCC/0214/G-13		- 1	CCL/KDM/NTPC-JV/NABINAGAR/NBCC/0213/G-13			Sample ID	9 Opposit Annual Control	Tost Report NoCIMEN/ROLL/TPS/KDH/NBCC/MAR/2023/08 Name of Coal Company: Central Coal Field Ind.
10-03-2023	20000001 07 97 9 100 100 100 100 100 100 100 100 100 1	10.03.2023	02-03-2023	00.00.0003		Date of collection		
C302-C0-67	200 200 200	14-03-2023	Canada Chan	14.03.2023	10000	Date of preparation		Prower Utility-NEPC-Next. Date of start of analysis -04.05 Product tested - Cool Sample
Section Printers	15,03,2021	15-03-2023		15-03-2023	laboratory	sample receiving at	Date of	Power Uninty-NIPC-NECL Date of start of analysis -04.05.2023 Product sisted - Coal Sample
A. C. C.	579.40	3490.72		415.30	(Mt)	R.A.	20	
-	161000895	161000635		161000894	Note No.	R.R.No./ F.	Railway Rake/N	
	11-03-2023			07-03-2023	N.P. DOVE	2	NGR *	
-	ju Im	4.4		3.7		2		
	40.4	20.0	35.5	43,3		N H SH S	Air-dried basis	Relative I
	3953.80	49,000	87 3557	3726,93	(kcal/kg)	~	basis	emperature of laboratory
	6.3	000	200	5,8	Street	NS.	(6)	3
	39.4	1	34.5	42.4		ASHS4	(60% RH & 40°C)	red moi
	3851		4213	3040	8	_	40°C)	36.7°C
	612		GII	CTO		226	Dowlead	

(iii) Testing Method followed - Ash & Moisture at per ASTM D-7582-15 & GEV as per ASTM D-5865-19, ITM as per IS 1350 (Part-I): 1984 Reaffirmed 2013

CSR-CIMFR, RC, RANCH (Authorited Signatory) (Dr. M.K. Salni)

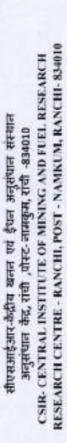
Customer Provided Information

^{**}Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

GE/Surphurfol value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4219-18). (iv) Name of the experiment is performed by external service provider.

⁽v) This report should not be replicated or reproduced.

⁽vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three morehs





Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 01.05.2022 to 07.05.2022

LOADING END ANALYSIS REPORT

5-2022		Z-5U Grade	612	611	611	612	010	612	610	611	610	611	611	610
Date:17-06-2022	Equilibrated moisture basis (60% RH & 40°C)	GCV (kcal/hg)	3847	4011	4071	3880	4381	3915	4450	4040	4304	4134	4246	4493
	brated moisture (60% RH & 40°C)	ASH%	38.7	37.4	36.7	39.3	32.8	38.8	32.2	37.5	33.4	35.6	34.4	31.4
atory:	Equilibra (60	MAS.	6.7	6.4	6.2	6.3	8.9	5.9	7.1	6.2	7.0	9.9	6.5	7.2
Relative Humidity of Laboratory: Temperature of Laboratory:	sasis	GCV (kcal/Ag)	3916.63	4092.39	4144.88	3950.06	4475.31	3981.12	4555.66	4108.81	4415.33	4222.16	4332,76	4594.27
Relative Hu Temperatu	Air-dried basis	ASH %	39.4	38.2	37.4	40.0	33.5	39.5	33.0	38.1	34.3	36.4	35.1	32.1
		2 2	5.0	4.5	4.5	4.6	8,4	4.3	4.9	4.6	4.6	4.6	4.6	5.1
đ	GR *	R.R. Date	02-05-2022	02-05-2022	02-05-2022	02-05-2022	02-05-2022	02-05-2022	03-05-2022	03-05-2022	07-05-2022	07-05-2022	08-05-2022	08-05-2022
	Railway Rake/MGR	R.R.No./ F. Note No.	161001260	161001260	141000085	141000086	141000087	141000087	161001262	161001262	161001270	161001270	161001272	161001272
	E.	R.R. Quantity (Mt)	482.60	3592.80	526.10	3320.60	589.50	3481.60	505.40	3367.90	697.75	3029.15	686.00	3357.00
C-MBCC shels -05.06.2022 oal Sample	Date of	sample receiving at laboratory	23-05-2022	23-05-2022	23-05-2022	23-05-2022	26-05-2022	26-05-2022	26-05-2022	26-05-2022	26-05-2022	26-05-2022	26-05-2022	26-05-2022
Power Utility-NTPC-MBCC Date of start of analysis -05-06-2022 Product tessedCoal Sample	The Marie Co.	Date of preparation	22-05-2022	22-05-2022	22-05-2022	22-05-2022	24-05-2022	24-05-2022	24-05-2022	24-05-2022	25-05-2022	25-05-2022	25-05-2022	25-05-2022
	35000035	collection	01-05-2022	01-05-2022	01-05-2022	01-05-2022	02-05-2022	02-05-2022	03-05-2022	03-05-2022	07-05-2022	07-05-2022	07-05-2022	07-05-2022
Test Report NoCIMFR/RNC/TPS/PLCP/NBCC/NAN/2022/85 Name of Cost Company: Central Cost Field US. Landing Anal/Siding-PHUEASIA		Sample ID	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0086/G-10	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0086/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0087/G-10	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0087/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0088/G-10	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0088/G-11	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0090/G-10	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0090/G-11	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0101/G-10	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0101/G-11	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0102/G-10	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0102/G-11
Test Rep. Name of Loading A	1	227	-	2		4	un.	9		60	m	10	11	12

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Customer Provided Information

**Grade as per the website of the Missisty of coal (www.csd.nic.ht/major-statistics/coal-grades, www.coal.gos.in/major-statistics/coal-grades)

(ii) Sample collected as per FSA.
(iii) Testing Method followed - Ash & Moisture as per ASTM 0-7582-13 & GCV as per ASTM 0-5885-19, DM as per IS LISS (Part-I): 1984 Teathlimed 2013 (II) Sulphur(s) value has been put in the boest calorimeter as determined in the laboratory following (ASTM 0-429-13).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be rupitizated or reproduced.
 (vi) The result related to the sample toiled. Assieve part of the sample will be destroyed after three months.



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 29.05.2022 TO 05.06.3022

LOADING END ANALYSIS REPORT

Date:14-07-2022	Power Utility-MTPC-MICC. Date of start of analysis -04-07-2022	Equilibrated moisture basis (60% RH & 40°C)	GCV Grade***	3482 G13	4077 G11
Date:14-03		rated moisture basis 60% RH & 40°C)		3482	740
		rated mois 60% RH & 4	140	JH	4
	Player Utility-NTPC-NBCC Date of start of analysis - 04-07-2022 Doctors tested - Cast Seamle Temperature of laboratory:	2 3	ASHIN	44.9	35.9
	8 5	Equilib	ž.	5.5	6.7
	midity of lab	nasir	GCV (kcal/kg)	3471.34	4072.21
	Relative Nu Temperatur	Air-dried basis	M % ASH %	5.8 44.8	35.9
		•	3		8.9
		GR.	R.R. Date	3712.81 161001306 29-05-2022	06-06-2022
		Railway Rake/MGR *	R.R.No./F. Note No.	161001306	161001316
		Ra	R.R. Quantity (NRt)	3712.81	3998.32
	C-MBCC salysis - 04.67, 2022 Cast Sensite	Date of	sample recoiving at laboratory	15-06-2022	22-06-2022
	Power Utility-NTP Date of start of ar Product tented - c		Date of preparation	11-06-2022	19-06-2022
			Date of collection	29-05-2022	05-06-2022
	NoCMFR/PNC/TPS/PLCP/NBCC/MAY 8.1LN/2022/10 I Company - Cettral Coal Reliable.	Dept. And Control of the Control of	Sample ID	CCI /BI CD /NTDC. IV/NABINAGAB/NBCC/0359/5-12	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0194/G-11
	/PLCP/MBCC/MAY & JUN/2022/10 Coal Field Ind.	San	228		

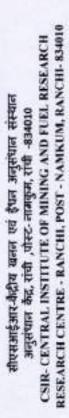
231

> **Grade as per the website of the Ministry of coal (www.coal.nic.in/imajor-statistics/coal-grades) www.coal.gos.in/imajor-statistics/coal-grades) * Customer Provided Information

Note:
(i) Sample collected as per 154.
(ii) Testing Michael Belowd - Ash & Moisture as per ASTM D-3982-15 & GCV as per ASTM D-3865-19, EM as per IS 1350 (Part-It 1384 Reaffirmed 2013 (iii) Testing Michael Belowd - Ash & Moisture as born to controller as determined in the laboratory following (ASTM D-428-18).
(iii) Note of the experiment is performed by external service provider.
(iv) This report should not be replicated as reproduced.
(iv) This report should not be replicated as reproduced.
(iv) The result related to the sample totaled. Reserve part of this sample will be destroyed after three months.

(Dr.M.L. 8







TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 02.04.2022 TO 03.04.2022

LOADING END ANALYSIS REPORT

Date:06-05-2022 Equilibrated moisture basis (Acal/kg) Ş 28.3°C (60% RH & 40°C) 383 ASHIN W.Sc Relative Humidity of laboratory femperature of laboratory (kcal/kg) Š Air-dried basis ASH % ×W R.R. Date Railway Rake/MGR * R.R.No./F. Note No. Quantity (MII) Power Utility- NTPC NBCC Date of start of analysis -02.05.2022 receiving at Laboratory Date of sample Product teited - Coal Sample preparation Date of collection Date of Test Report No.-CIMFR/RNC/TPS/SLSP/NBCC/APR/2022/02 Name of Coal Company. Central Coal Field Utd. Sample 1D Loading Area/Siding-Shivpoor (Amarpali Area) 229

CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/0019/G-12 * Customer Provided Information

"Grade as per the website of the Ministry of coal (www.coal.nic.In/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

[ii) Testing Method followed - Ash & Molsture as per ASTM D-7582-15 & GCV as per ASTM D-3865-19, EM as per IS 1350 (Part-II) 1984 Noaffinned 2013 (III)Suighur(s) value has been put in the bomb calorimater as determined in the laboratory following (ASTM D 4239-18).

(iv) Name of the experiment is performed by external service provider.

(i) Sample collected as per FSA.

(v) This report should not be replicated or reproduced.

(xi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.



611 613 613 613

4191 4145 3559 3587 3438

38.8

2.0

4305.88 4253.60

39.9 40.1

2.4

02-04-2022

4008.80 3958.60 4004.12

13-04-2022

08-04-2022

08-04-2022 13-04-2022

02-04-2022 02-04-2022

CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/0010/G-13

m đ

CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/0017/G-12 CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/0018/G-12

CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/0009/G-13

2.3 2.1

02-04-2022

161001314 141000095

46.6

3625.93

47.5 47.7

161001317 03-04-2022

161001318 03-04-2022

3988.73

09-04-2022 13-04-2022

03-04-2022 03-04-2022

09-04-2022 13-04-2022

3635.46

2.1 2.0

19.1

4.8 3.9 3.4 47.9

8

3505.83

48.8

03-04-2022 09-04-2022 13-04-2022 3977.00 161001319 03-04-2022

47.1

Grade Analy

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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 04.04.2022 TO 05.04.2022

LOADING END ANALYSIS REPORT

Report NoCIMPE/RNC/TPS/SLSP/NBCC/APN/2022/63	Power Utility- NTPC NBCC
me of Coal Company. Central Coal Reid Ltd.	Date of start of analysis -04.05.202
Iding Area/Siding-Shivpoor (Amarpal) Area)	Product tested - Coal Sample

		Grade (g)			614		
36.5%	ture basi IO'C)	GCV (kcal/kg)	3864	3844	3367	3601	
	50% RH & 40°C)	ASH%	46.4	46,1	47.2	46.6	
	Equilibrated moisture basis (60% RH & 40°C)	MX 12 22 22 22 23 24 25 25 25 25 25 25 25 25 25 25 25 25 25	12 22 22 22 22 22 22 22 22 22 22 22 22 2	MS 1.7	.60 1.7 .68 2.2 .98 2.2	2.2	3.5
e of laboratory:	sissed	GCV (kcal/kg)	3856.60	3851.68	3394.98	3679.13	
Temperature of I	Air-dried basis	M% ASH%	46.3	46.2	47.6	47.6	
	,	26	1.9	2.0	1.4	1.4	
	GR *	R.R. Date	04-04-2022	04-04-2022	05-04-2022	05-04-2022	
	Railway Rake/MGR *	R.R.No./F. Note No.	3811.20 161001321	161001320	161001323	161001332	
	Rai	R.R. Quantity (Mt)	3811.20	3943.80	4010.00	4024.08	
Coal Sample	Date of	sample receiving at laboratory	204-2022 16-04-2022	2-04-2022 16-04-2022	2.04-2022 16-04-2022	16-04-2022	
Product tested - Coal Sample	35	Date of preparation	12-04-2022	12-04-2022	12-04-2022	12:04:2022 16:04:2022	
		Date of collection	04-04-2022	04-04-2022	05-04-2022	05-04-2022	
Leading Aren/Skiling-Shivpoor (Amerpal) Area)		Sample ID	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/0025/G-12	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/0026/G-12	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/0031/G-13	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/0032/G-13	
Leading	1 3	230	-	~		4	

233

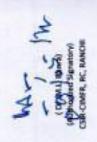
Date:09-05-2022

338

Relative Humidity of laboratory.

(i) Sample collected as per FSA.

(ii) Testing Method followed - Juh & Moliture as per ASTM D-7583-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Purt-I): 1984 Realfrened 2013



^{*} Customer Provided Information

^{**}Strade as per the website of the Ministry of coal (www.casi.nt.len/major-statistics/coal-grades, www.coal-gov.in/major-statistics/toal-grades)

⁽Hi)Sulphur(c) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4239-18).

⁽iv) Nane of the experiment is performed by external service provider.

⁽v) This report should not be replicated or reproduced.

⁽vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.



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Analytical results of coal samples collected by CSIR-CIMER (Third Party Sampling) during the period 19.06.2022 TO 20.06.2022

LOADING END ANALYSIS REPORT

Test Report No. CMFR. Name of Coal Company	Test Report No. CIMFR/RNC/TFS/VLCF/NBCC/JUN/2622/13 Manne of Contrastey. Central Cost Held Ltd. According According to BASIA		Power Utility-NTPC-NBCC Date of start of analysis -1 Product tester! - Coal San	PC-NBCC analysis -17.07.2022 Coal Sample				7.70	Relative Hur Temperatur	elative Humidity of laboratory emperature of laboratory	atory		38.50	
				Date of	2	Railway Rake/MGR *	GR *	4	Air-dried basis	asis	Equilibra (60	brated moisture (60% RH & 40°C)	Equilibrated moisture basis (60% RH & 40°C)	
231	Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	M % ASH %	ASH %	GCV (kcal/kg)	N/A	ASHS	GCV (kcal/kg)	Grade **
1 CCL/PLC	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0225/G-12	19-06-2022	02-07-2022	04-07-2022	3882.40	161001332	3882.40 161001332 19-06-2022	5.1	43.4	3566.67	6.2	42.9	35.25	613
o cci/bic	CCLUBICE/NTEC.IV/NABINAGAR/NBCC/0227/G-12	20-06-2022	20-06-2022 02-07-2022	04-07-2022	3674.60	141000109 20-06-2022	20-00-2022	5.0	44.1	3547.18	5.9	43.7	3514	613

234

montes 15E

(Dr. M.K. Sami) [Authorized Sgnatory] CSB-CMFR, RC, RANDH

* Customer Provided Information

**Grade as per the website of the Ministry of cast (www.cosl.nic.in/major-statistics/cast-grades, www.cost.gov.in/major-statistics/cast-grades)

(i) Testing Method followed - Ash & Moisture as per ASTM D-7922-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Part-I): 1984 Realthmed 2013 (ii) Testing Method followed - Ash & Moisture as per ASTM D-7922-15, and the laboratory following (ASTM D-4239-18).

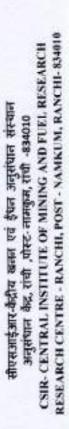
[iii) Mone of the experiment is performed by external variate provider.

[iv) Mone of the experiment is performed by external variate provider.

[iv) This regart should not be replicated or reproduced.

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TC-5897

Analytical results of cost samples collected by CSIR-CIMFR (Third Party Sampling) during the period 17.04.2022

LOADING END ANALYSIS REPORT

Equilibrated moisture basis (60% RH & 40°C) M% 4.3 Relative Humidity of laboratory: Temperature of laboratory: (kcal/kg) 3618.56 Ş Air-dried basis ASH % 46.3 M % 161001338 17-04-2022 3.4 R.R. Date Railway Rake/MGR * R.R.No./F. Note No. Quantity 4005.73 (MII) Date of start of analysis -16.05.2022 CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/0135/G-13 17-04-2022 24-04-2022 29-04-2022 receiving at Isboratory Product tested - Coal Sample Date of eldures POWER UTILITY- NITPC NECC preparation Date of collection Date of Test Report No.-CIMFR/RINC/TPS/SSP/NBCC/APR/2022/06 Name of Coal Company- Central Coal Field Ltd. Sample ID Loading Area/Siding-Shivpoor (Amerpall Area) 232

235

Date:21-05-2022

45% 277 613

3585

45.9

(Neal/kg)

ASH%

200

* Customer Provided Information

**Grade as per the website of the Ministry of coal (www.cost.nic.in/major-statistics/coal-grades, www.coal-gry.in/major-statistics/coal-grades)

(i) Sample collected as per FSA.

(II) Testing Method followed - Ash & Meinture at per ASTM D-7582-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Part-I): 1356 Realfirmed 2017

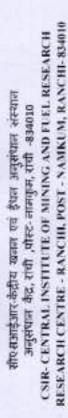
(iii)Sulphuris) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 423H-18).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

2) (b) M. Barri) CSIR-CIMPR, RC, RANCHI





TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 11.06.2022

LOADING END ANALYSIS REPORT

Power Utility-NTPC NBCC Date of start of analysis -17.07.2022 Test Report No. CIMPK/RNC/TPS/SLSP/NBCC/JUN/2022/08 Name of Coal Company. Central Coal Field Ltd.

		A S		
26.5%	Equilibrated moisture basis (60% RH & 40°C)	GCV (Ncal/kg)		3745
	(60% RH & 40°C)	ASHN	45.0	44.0
	Equilibra (60	M%	4.6	4.5
Temperature of laboratory.	siste	GCV (kcal/kg)	3544.13	3721.57
Temperatu	Air-dried basis	ASH %	45.0	43.7
	1	N %	4.5	5.3
	IGR.	R.P. Date M % ASH % (Rcal/kg)	11-06-2022	11-06-2022
	Bailway Rake/MGR *	R.R.No./ F. Note No.	161001343	161001342
	Ra	R.R. Quantity (Mt)	3947.20	3933.00
Coal Sample	Date of	receiving at	30-06-2022 04-07-2022 3947.20 161001343 11-06-2022 4.5 45.0 3644.13	04-07-2022
Product texted - Coal Sample		preparation r	30-06-2022	01-07-2022
		Date of	11-06-2022	11-06-2022
ng Ansa/Siding-Shispoor (Amarpali Ansa)		Sample ID	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/0590/G-13	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/0591/G-13
2		233	-	-

236

Date:25-07-2022

Relative Humidity of laboratory:

613

* Customer Provided Information - 2

St. No.

**Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

Note:

(i) Sample collected as per FSA.

(ii) Testing Method followed - Ash & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-5885-19; EM as per iS 1350 (Part-I): 1984 Reaffirmed 2013

(III)Subhur(s) value has been put in the bamb calorimeter as determined in the laboratory following (ASTM D 4239-18).
(iv) None of the experiment is performed by external service provides.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

CSIR-CIMFR, RC, RANCHI (Authorised Signatory) (Dr. M.K. Salnt)



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TC-5897

Analytical results of coal samples collected by CSIR CIMFR (Third Party Sampling) during the period 29:06.2022 TO 15.07.2022

LOADING END ANALYSIS REPORT

8-2022			Analysed Grade **	612	612
Date: 18-08-2022	10% 226.2°C	Equilibrated molsture basis (60% RH & 40°C)	GCV (kcel/kg)	3376	3913
_		(60% RH & 40°C)	ASHX	39.1	39.3
	dan't	Equilibra (60	MS	6.4	6.2
	Relative Humbilty of laboratory. Temperature of laboratory:	siste	(Brail/kg)	3797.02	3858.81
	Relative Hu Temperatur	Air-dried basis	ASH %	38.3	38.8
		•	*	8.3	7.5
		GR.	R.R. Date M% ASH % (kcal/kg)	629,91 161001348 30-06-2012 8.3 38.3 3797.02	15-07-7022
		Railway Rake/MGR *	R.R.No./ F. Note No.	161001348	161001358
		128	R.R. Quantity (Mt)		3988,00
	C-MBCC alyas -11.08.2022 oal Sample	Date of	receiving at laboratory	14-07-2022 18-07-2022	27.07.2022 30.07.2022 3988.00 161001358 15-07-3022 7.5
	Power Builty NTPC-MBCC Data of that of analysis -11.03.2022 Product tested - Coal Samale		Date of preparation	14-07-2022	27-07-2022
			Date of collection	29-06-2022	15-07-2022
	These Reports NoControl (NOSC) They Public (NOSC) (LINK & ALL, 2022) List Name of Cost Company - Central Cost Floid Ltd. Costing Area (Notice PHULEASIA)		Sample 1D	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0255/G-11	CCL/PLCP/NTPC-IV/NABINAGAP/NBCC/0298/G-12
	Test Rep Name of Loading		234	-	2

* Customer Provided Information

**Grade as pur the websits of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/ntajor-statistics/coal-grades)

(ii) Sample collected as per 15A.

(Dr. MEMoring P & (Authorized Streetow)
CSR CIMER, RC. PANO-

(ii) Testing Method followed - As it Melstere as per ASTM 0-7582-15 & GCV as per ASTM 0-5055-13. EM as per IS 1350 (Part-i): 1984 feathermed 2013 (iii)Sulphufs) value has been put in the been cateriment as determined in the laboratory following (ASTM 0-4239-18).

(iv) Note of the experiment is performed by external service provider.

(iv) This report should not be explained or reproduced.

(iv) This report should not be explained or reproduced.

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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 21.08.2022

LOADING END ANALYSIS REPORT

Test Report No.-CIMFR/RNC/TPS/SLSP/NBCC/AUG/2022/013 Name of Coal Company- Central Coal Field Ltd. Loading Area/Siding-Shiypoor (Amarpail Area)

Sample ID

235

Power Utility- NTPC NBCC Date of start of analysis -25.09.2022

Product tested - Coal Sample

Temperature of laboratory Air-dried basis Railway Rake/MGR * Date of

238

Equilibrated moisture basis

(60% RH & 40°C)

24.17

Relative Humidity of laboratory.

Date 30-09-2022

613 612

3558 3712

46.3 44.2

3.8

3465.39 3603.17

(kcal/kg)

ASHS

ž

(kcal/kg)

SO

ASH % 45.1 × 6.9 21-08-2022 | 28-08-2022 | 03-09-2022 | 4035.00 | 161001350 | 21-08-2022 21-08-2022 28-08-2022 03-09-2022 4033.26 161001349 21-08-2022 R.R. Date R.R.No./ F. Note No. Quantity (ME) R. R. receiving at laboratory sample preparation Date of collection Date of CCL/SISP/NTPC-JV/NABINAGAR/NBCC/0931/G-12 CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/0930/G-12

* Customer Provided Information

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** Grade as per the wetsite of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades) Note

(I) Sample collected as per ISA.

(ii) Testing Method followed - Ash & Molsture as per ASTM D-7582-15 & GCV as per ASTM D-5665-19, EM as per IS 1350 (Purt.l): 1984 Realfilimed 2013

(HISJahhuris) value has been put in the bomb colonimeter as determined in the laboratory following (ASTM D 4239-48).

(N) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

CSIR-CIMPIR, RC, RANCHI (Authorized Signatory) (Dr. M.K. Sain!)



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236

**Grade on per the website of the Ministry of cost (www.cost.nic.in/major-statistics/cost-grades, www.cost.gov.in/major-statistics/cost-grades) * Customer Provided Information

(iii) Testing Method fellowed: Ach & Moldure as per ASTM 0-7582-45 & GCV as per ASTM 0-5865-19, EM as per IS 1350 (Part IQ: 1984 Reaffirmed 2013 (Fighuric) salue has been put in the bords calculation at detarrelment in the liaboratory following (ASTM 0-4299-18).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.
 (v) The result related to the sample besent. Reserve part of the Sample will be destroyed after shore morths.

TC-5897

RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI- 834010 CSIR-CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH

तीएसआईआर-फेट्टीय बतन एवं ईपन अनुसंधान संस्थान अनुसंधान केंद्र, रांची ,पोस्ट- नामकुम, रांची -834010 Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 04.07.2022 TO 11.07.2022

LOADING END ANALYSIS REPORT

Date: 14-08-2022 27.075 181 Relative Humidity of Inboratory: Temperature of laboratory. Power Utility-NTPC-NBCC Date of start of analysis -01.08.2022 Preduct tested - Coal Sample Test Report No.-CIMER/HNC/THS/PLCP/NBCC/3UL/2022/17 Name of Coal Company- Central Coal Field Utd. Loading Area/Sisting Prott BASIA

1		₹ ७		L		23				
	Equilibrated moisture basis (60% RH & 40°C)	GCV (kcal/Ng)	3977	3916	4328	4040	3968	3796	3871	
	brated moisture (60% RH & 40°C)	ASHOK	35.5	36.1	33.2	36.5	37.4	39.4	39.3	
	Equilibra (60	M%	7.3	8.5	7.9	7.1	6.6	6.5	5.8	
	basis	GCV (kcal/kg)	3943.04	3920.70	4290.31	3996,05	3922.88	3759.04	1801.33	
		ASH %	36.3	36.1	32.9	36.1	37.0	39.0	38.6	
		ž ž	8.1	8.4	8.7	8.1	7.6	7.4	7.5	
		R.R. Date	05-07-2022	05-07-2022	06-07-2022	06-07-2022	11-07-2022	11-07-2022	11-07-2022	
The second second	Railway Rake/MGR *	R.R.No./F. Note No.	161001352	161001352	161001354	161001354	141000110	141000110	141000110	
	2	R.R. Quantity (Mt)	2922.95	886.14	2981.20	993.80	283.50	444.70	3466.50	
Contract Services	Date of	Date of sample preparation receiving at laboratory			22-07-2022	22-07-2022	27-07-2022	27-07-2022	27-07-2022	
PERSONAL LINNORS -					19-07-2022	19-07-2022	24-07-2022	24-07-2022	24-07-2022	
		Date of collection	04-07-2022	04-07-2022	05-07-2022	05-07-2022	11-07-2022	11-07-2022	11-07-2022	
cal Salare PHULHANIA		Sample ID	CCL/PLCP/NTPCJV/NABINAGAR/NBCC/0267/G-10	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0267/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0270/G-10	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0270/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0286/G-10	CCL/PLCP/NTPC.JV/NABINAGAR/NBCC/0286/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0286/G-12	

Grade **

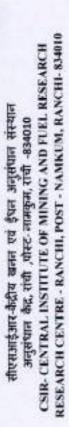
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(Authorized Signatory) CSIR-CIMTR, RC, RANCHI (Dr. M.K. Sain)





TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 23.09.2022 TO 24.09.2022

LOADING END ANALYSIS REPORT

Date 11-11-2022 SMK 24.9°C	77.5	GCV Grade ***	8683	+	+
Date 24 N.	" # 9		\perp	L	+
	rated m	ASH%	46.3	+	1
the second	Equilib	M	4.3	46	9
Relative Humidity of laboratory: Temperature of laboratory:	1855	GCV (kcal/kg)	46.7 3612.35	3638 71	44.44.44.44
Relative Hu Temperatu	Air-dried basis	ASH %	46.7	46.8	410.0
	4	M % ASH %	2 2	33	
	GR *	R.R. Date	03-10-2022 08-10-2022 3951.47 161001174 21-09-2022	24-09-2022	34.00.1033
	Railway Rake/MGR *	R.R.No./ F. Note No.	161001374	4041.88 161001375 24-09-2022	161001236
21	Ra	R.R. Quantity (Mt)	3951.47	4041.88	4034 36
PC NBCC salysis 47.11.203 Coal Sample	Date of	receiving at Auantity (Mt)	08-10-2022	03-10-2022 08-10-2022	08.10.3033
Power Utility NTPC NBCC Date of start of malysis 47.11.2022 Product Nested - Coal Sample	7	preparation receiving at laboratory	03-10-2022	03-10-2022	24.09.2029 08.10.2021 08.10.202 cont. an. st. cont. an. st
	7	collection	23-09-2022	24-09-2022	24.09.3033
Test Report NoCMFR/RMC/TPS/SLSP/NBCC/92P/2022/16 Name of Cost Company. Central Cost Feld Ltd. Losding Area/Sking-Shiopson (Amargal Area)		Sample ID	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/1125/G-12	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/1128/G-12	CCL/SLSP/NTPC-JV/NABINAGAR/NRCC/1129/G-12
ame of Co	+4	237	1 0	2 0	3

240

Grade ** Analysed

**Grade as per the unbotte of the Ministry of cost (www.cost.nic.in/major-statistics/cost-grades, www.cost.gov.in/major-statistics/cost-grades)

(i) Sample collected as per FSA.

(b) Testing Method followed - Ash & Monture as per ASTM 0-7982-15 & CKV as per ASTM 0-5965-15, EM as per IS 1350 (Part-U: 1984 Reaffured 2013)
[Fit]Sulphar(s) salue has been put in the bords calorimenter as determined in the laboratory following (ASTM 0-4259-18).
[Iv) Mone of the experiment is performed by external service provider.
[Iv) This report should not be replicated or reproduced.

(w) The result related to the sample tested. Reverue part of the sample will be destroyed after three months.

(Authorized Signatory) (Dr. M.K. Saint)

CSR-CIMFR, RC, RANCHI

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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 23.08.2022 TO 24.08.2022

LOADING END ANALYSIS REPORT

Sex	quilibrated moisture basis (60% RH & 40°C)	GCV (kcst/kg)
	orated moisture 60% RM & 40°C)	ASHS
done	Equilibra (60	MS
Relative Humidity of laboratory: Temperature of laboratory:	siseq	GCV (kcal/kg)
Palather Hu Temperatu	ur-dried basis	ASH %
37.12	•	×
	IGR.	R.R. Date M% ASH % (kcal/kg)
	Railway Rake/MGR	R.R.No./ F. Note No.
	2	R.R. Quantity (het)
Power Utility NTPC NBCC Outs of start of analysis -11,10,2022 Product tested - Coel Sample	Date of	receiving at laboratory
Power Utility MTPC-NBCC Date of start of analysis -11,10 Product britted - Coel Sample		preparation
	1	collection
Commercial Physics product autographs empare—Centest Coal Peld Ltd. delng-Physialsist		Sample ID
Name of Coal Co Loading Arms/54	ī	238 i <u>ž</u>

***Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistic/coal-grades, www.coal.gov.in/major-statistics/coal-grades) CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0403/G-12
* Costomer Provided Information

23-08-2022

CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0401/G-12

(i) Sample collected as per PSA

(iii Testing Method followed - Ash & Molitare as per ASTM D-7583-15 & GCV as per ASTM D-5865-15, EM as per R5 1350 (Part-I): 1984 Resiftmed 2013 (iii)Sulphuris) volue has bees put in the bern't calcement an determined in the laboratory following (ASTM D-4259-18).

(h) None of the experiment is performed by external service provider.

(w) This report should not be replicated or reproduced.

(w) The result related to the sample tested. Reserve part of the sample will be destroyed after three mosths.

(Authorized Signatury) CSR-CIMFR, RC, RANCHI (Dr. M.X. Sales)

Grade ** Analysed

Date: 19-10-2022

611 612

4026 3827

39.5 37.3

6.3 6.4

23-08-2022 12-09-2022 15-09-2022 3943.03 161001380 24-08-2022 7.7 36.8 3969.97 24-08-2022 12-09-2022 15-09-2022 4025.94 161001381 25-08-2022 6.9 39.2 1802.28



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 31.08.2022 to 22.09.2022.

LOADING END ANALYSIS REPORT

1-2022			Analyses Grade	613	614	611	612	613
Date :04-11-2022	50% 24.5°C	Equilibrated moisture basis (60% RH & 40°C)	GCV (kcal/kg)	3563	3355	4125	3886	3481
		(60% RH & 40°C)	ASHX	42.6	45.1	35.7	38.6	47.7
	attory:		N N	6.2	6.3	2.0	5.5	2.4
	Relative Humidity of laboratory. Temperature of laboratory:	basis	GCV (kcal/kg)	3551.41	3340.32	4072.24	3888.74	37.6 3968.64
	Relative Hy Temperativ	Air-dried basis	M % ASH %	42.5	44.9	35.2	37.7	37.6
		*	ž	6.5	6.7	8.2	7.8	8.8
		GR.	R.R. Date	4035.60 161001383 31-08-2022 6.5	01-09-2022	3957.10 161001387 10-09-2022	3587.58 161001388 12-09-2022	22-69-2022
		Railway Rake/MGR *	R.R.No./F. Note No.	161001383	3978.30 161001384	151001387	161001388	161001340
		B	R.R. Quantity (Mt)	4035.60	3978.30	3957.10	3587.58	3584.40
CABC	alysis 11.10.202 cal Sample	Date of	sample receiving at laboratory	15-09-2022	23 09 2022	26-09-2022	26-09-2022	28.09.2027 01.10.2022 3588.40 161001340 22.09.2027 6.8
Fower Utility-NTPC-NBCC	Date of start of analysis -11.10.2022 Product tested - Coal Sarrigle		Date of preparation	13-09-2022 15-09-2022	20-09-2022	21-09-2022	24-09-2022	28.09.3032
			Date of collection	31-08-2022	01-09-2022	10-09-2022	12-09-2022	33,09,3032
Test Report NoCIMPR/RNC/TPS/PLCP/NBCC/AUG & SEP/2022/25 Name of Cost Company- Central Cost Held Ind.			Sample ID	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0411/G-12	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0412/G-12	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0418/G-12	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0420/G-12	CONTRICTOR IN THE STANDARD AND PROPERTY (SECTION 1)
Tark Barry	Name of		≠23 9	+	7	m	4	

Analysed Grade **

611 612

CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0424/G-12
* Customer Provided Information

**Grade as per the websits of the Ministry of coal (www.coal.nic.in/irrajor-statistics/coal-grades, www.coal.gov.in/irrajor-statistics/coal-grades)

(i) Sample collected as per FSA.

10 Testing Nethod followed - Ath & Molsture as per ASTM 0-792-35 & 6CV as per ASTM 0-5865-35, EM as per IS 1350 (Part-I) 1594 Reaffinned 2013 (iii)Suipharis) value has been put in the benth calorimeter as determined in the laboratory following (ASTM 0-4259-18).

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.
 (vi) This result related to the sample tested. Besieve part of the sample will be destroyed after three months.





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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 29.09.2022 TO 08.10.2022

LOADING END ANALYSIS REPORT

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Date30-11-2022

1

Relative Humidity of laboratory:

Married Street, Street	the name of calculations in contrast of the last of
Name of Coal Company- Central Coal Field Ltd.	Date of start of analysis -22.11.27
London Avea (Sidles Shienter (Amarcal Avea)	Product texted - Coal Sample

		Grade "	613	613	613
23.8°C	ure basis 0'C)	GCV (kcal/kg)	3401	3419	3480
	brated moisture (60% RH & 40°C)	ASH%	48.8	49.2	48.9
	Equilibrated moisture basis (60% RH & 40°C)	×	4.4	3.2	3.5
Temperature of laboratory		GCV (kcal/kg)	3404.50	3430.09	3497.53
Temperatur	Air-dried basis	M % ASH %		49.4	49.2
	a	2 %	4.3	2.9	3.0
	GR.	R.R. Date	1095.36 161001384 29-09-2022	61001400 08-10-2022	3984.77 161001399 08-10-2022
	Railway Rake/MGR *	R.R.No./ F. Note No.	161001384	161001400	161001399
80	Ra	R.R. Quantity (Mt)	4095.36	3994.60	3984.77
oal Sample	Date of	sample receiving at laboratory	17-10-2022	20-10-2022	20-10-2022
Product tested - Coal Sample		Date of preparation	11-10-2022 17-10-2022	15-10-2022 20-10-2022	15-10-2022 20-10-2022
		Collection	29-09-2022	08-10-2022	08-10-2022
Area/Siding-Shippon (Amarpali Area)		Sample ID	CCL/SISP/NTPC-JV/NABINAGAR/NBCC/1157/G-13	CCL/SLSP/NTPC.IV/NABINAGAR/NBCC/1199/G-12	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1200/G-12
Loading		ii ∮ 240	-	2	9

* Customer Provided Information

(i) Sample collected as per FSA.

[ii] Tissing Method followed - Ash & Melsture as per ASTM D-7982-15 & GCr as per ASTM D-5865-19, EM as per IS 1350 (Part-II: 1984 Restfirmed 2013) [10]Sulphur(s) value has been put in the bomb calorimeter as determined in the Indonesia following (ASTM D 4239-18).

(N) None of the experiment is performed by external service provider. (V) This report should not be replicated or reproduced.

(A) The result related to the sample tested. Reserve part of the sample will be destroyed other three months.

CSIR-CIMPR, RC, RANCHI (Authorized Signatory) [Dr. M.K. Sain!]

[&]quot;Grade as per the website of the Ministry of coal (www.coal.nic.ln/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 29,09,2022 TO 06,10,2022

LOADING END ANALYSIS REPORT

_⊯ <u>∮</u> 241	Londing Area/Siding-Shivpoor (Amarpell Area)		Daba of start of analysis -19.1 Product tested - Coal Semple	Date of start of analysis -19.11.3022 Product tested - Coal Sample	20				Relative Hu Temperatur	Relative Humidity of laboratory: Temperature of laboratory:	ratory:		38%
		8	15	Date of	R	Railway Reke/MGR	MGR *		Air-dried basis	sise		Equilibrated moisture basi (60% RH & 40°C)	ure bas
-	Sample ID	collection	Date of preparation	receiving at laboratory	R.R. Quantity (Mt)	R.B.No./ F. Note No.	R.R. Date	\$	ASH %	GCV (kcal/kg)	NA.	ASHS	GCV (kcal/kg
1 6	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1158/G-13	29-09-2022	11-10-2022	11-10-2022 17-10-2022	4109.33	161001385	29-09-2022	4.2	49.3	3378.32	4.5	49.1	3368
2 6	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1163/G-13	30-09-2022	12-10-2022	17-10-2022	4082.34	161001389	30-09-2022	4.0	9.05	3171.71	3.6	8008	3185
3 C	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1164/G-13	30-09-2022	12-10-2022	17-10-2022	4055.60	161001388	30-09-2022	4.2	6.69	3221.67	3.7	50.2	3238
4	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1169/G-13	01-10-2022	12-10-2022	17-10-2022	4065.91	161001390	01-10-2022	4.3	50.5	3206.00	4.0	50.7	3216
3 6	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1170/G-13	01-10-2022	12-10-2022	17-10-2022	4038.22	161001391	01-10-2022	4.3	50.4	3228.95	4.0	50.6	3239
9	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1174/G-13	01-10-2022	13-10-2022	17-10-2022	4032.53	161001392	01-10-2022	4.3	42.2	3922.93	3.9	42.4	3939
7 6	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/1175/G-13	02-10-2022	13-10-2022	17-10-2022	3970.57	161001393	02-10-2022	4.4	42.2	3921.22	4.0	42.4	3938
3 8	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1176/G-13	02-10-2022	13-10-2022	17-10-2022	4029.66	161001394	02-10-2022	4.3	43.2	3887.48	3.9	43.4	390
9	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/1179/G-13	04-10-2022	13-10-2022	13-10-2022 17-10-2022	4020.12	161001396	04-10-2022	4.2	43.1	3905.33	4.4	43.0	3897
10 01	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/1180/G-13	04-10-2022	13-10-2022	17-10-2022	4051.20	161001395	04-10-2022	4.1	43.5	3880.14	4.3	43.4	3872
11 0	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/1185/G-13	05-10-2022	14-10-2022	17-10-2022	3993.99	161001397	05-10-2022	4.8	43.7	3774.52	4.6	43.8	3782
12 0	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/1188/G-13	06-10-2022	14-10-2022	14-10-2022 17-10-2022		4004.20 161001398	06-10-2022	5.0	43.6	3752.04	4.4	43.9	3776

244

(kcal/kg)

614 614

3368

614 614 **G12** 612

3238

3239 3938 3904

Analysed Grade **

ure basis

Date 22-11-2022

* Customer Provided Information

**Grade as per the website of the Ministry of coal (www.coal.nkc.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

(i) Sample collected as per PSA.

(ii) Testing Method followed - Ash & Molsture as per ASTM 0-7542-11 & GCV as per ASTM 0-5665-19, RM as per 15 1359 (Mart-I): 1384 Neaffirmed 2013 (ii)Sulphur(s) value has been put in the bomb calculmenter as determined in the laboratory following (ASTM 0-4239-13).

(ii) None of the experiment is performed by external service provider.

This report should not be regilizabed or reproduced.
 The result related to the sample tested. Reserve part of the sample will be destrayed after these mentis.



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3776

CHR.CIMFR, RC, RANCHI (Authorited Signatory) (Dr. M.X. Saint)



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 20.10,2022 TO 12.11.2022

LOADING END ANALYSIS REPORT

Single Coal Corpus Courpus C	Test 8	Test Report NoCINER/RNC/TPS/PLCP/NBCC/CGT & NOV/2002/12		Power Utility-NTPC-NECC	PCABCC									Date: 27-12-2022	12-2022
Sample ID Date of Sample ID Sample ID Date of Sample ID	Name	of Cost Company. Central Cost Build Ltd. Ig Area/Schag-PicLIBASIA		Date of start of a Product tested	malysis -16.12.302 Cost Sample	2				Relative IS. Timperatu	midity of labor.	attery.		23.470	
Sample Date of CCL/PLCP/NTPC-LV/NABINAGAR/NBCC/04497/G-10 Collection preparation receiving st R.R.Nbol-f. R.R.Date M. M. ASH M. GGV M. M. ASH M.	- 1				Date of	ŭ.	allway Rake/N	AGR *		Mr-dried	sesis	Equilibra (9)	ated mos	ture bosis 10°C)	
CCLPLCP/NTPC-IV/NABINAGAR/NBCC/0449/G-10 20-10-2022 05-11-2022 18-11-2022 18-11-2022 4075-35 16-1001418 05-11-2022 6.1 33.3 4367 6.2 33.3 4867 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0493/G-11 07-11-2022 18	N o	Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quantity (Mt)	R.R.Mo./F. Note No.	R.R. Date	N X	ASH %	GCV (kcal/kg)	MSK	ASHK	(kcal/kg)	Analysed Grade ***
CCUPLCP/NTPC-IV/NABINAGAR/NBCC/0485/G-11 00+11-2022 13-11-2022 13-11-2022 13-12022 13-11-2022 13-12022 13-11-2	1	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0447/G-10	20-10-2022	01-11-2022	05-11-2022	3362.30	161001402	20-10-2022	4.1	44.3	1736.20	4.9	43.9	3205	612
CCUPICP/NTPC-IV/NABINAGAR/NBCC/0492/G-11 07-11-2022 18-11-2022 18-11-2022 18-11-2022 5-1 41.2 8801.18 4-6 41.4 3821 CCUPICP/NTPC-IV/NABINAGAR/NBCC/0493/G-11 07-11-2022 18-11-2022 18-11-2022 18-11-2022 5-1 41.2 8801.18 4-6 41.4 3821 CCUPICP/NTPC-IV/NABINAGAR/NBCC/0493/G-11 08-11-2022 18-11-202	~	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0485/G-11	04-11-2022	13-11-2022	18-11-2022	4075,35	161001418	05-11-2022	6.1	33.3	4367.14	6.2	33.3	4362	610
CCUPLCP/NTPC-IV/NABINAGAR/NBCC/0493/G-11 07-11-2022 18-11-2022 18-11-2022 5-1 41.2 8801.18 4-6 41.4 3821 CCUPLCP/NTPC-IV/NABINAGAR/NBCC/0497/G-11 08-11-2022 18-11-2022 18-11-2022 5-1 40.0 3797.43 6-7 39.5 3745 CCUPLCP/NTPC-IV/NABINAGAR/NBCC/0497/G-12 08-11-2022 18-11-2022 18-11-2022 18-11-2022 5-7 39.3 39.1 2-7 38.8 38.9 CCUPLCP/NTPC-IV/NABINAGAR/NBCC/0499/G-11 08-11-2022 18-1		CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0492/G-11	07-11-2022	13-11-2022	18-11-2022	3974,60	161001423	07-11-2022	6.0	33.6	4367.59	5.1	33.9	4409	610
CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0497/G-11 08-11-2022 18-11-2022 18-11-2022 4025-60 181001429 09-11-2022 5-3 39-3 3912-21 6-6 38-8 38/59 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/04997/G-12 08-11-2022 18-11-2022 18-11-2022 18-11-2022 5-2 41.3 3720.76 6-8 40.7 36/6 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0499/G-11 08-11-2022 18-11-2022 18-11-2022 4070-39 181001429 09-11-2022 5-8 34-4 426/47 7-2 33-9 4201 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0509/G-11 10-11-2022 18-11-2022	4	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0493/G-11	07-11-2022	13-11-2022	18-11-2022	3950.50	161001422	100	5.1	41.2	3801.18	4.6	41.4	3821	612
CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0497/G-12 08-11-2022 18-11-2022 18-11-2022 5-79-20 161001425 09-11-2022 5-2 41.3 3720.76 6.6 40.7 3666 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0499/G-11 08-11-2022 18-11-2022 18-11-2022 18-11-2022 5-79-20 161001425 09-11-2022 5-8 34-6 426447 7-2 33-9 4201 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0509/G-11 09-11-2022 18-11-2022 18-11-2022 18-11-2022 5-8 34-6 426447 7-2 33-9 4201 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0502/G-11 10-11-2022 18	10	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0497/G-11	08-11-2022	14-11-2022	18-11-2022	4070 CR	161001424	09-11-2022	5.4	40.0	3797.43	6.7	39.5	3745	612
CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0498/G-11	10	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0497/G-12	08-11-2022	14-11-2022	18-11-2022	-0757D	161001424	09-11-2022	8.3	39.3	3912.21	6.6	38.8	3859	612
CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0999/G-11 09-11-2022 19-11-2022 4070-39 161001426 09-11-2022 6-3 33-6 4238-84 77 33-1 4176 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0503/G-11 10-11-2022 18-11-2022 18-11-2022 18-10-12022 5-8 34-4 426447 7-2 33-9 4201 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0502/G-11 10-11-2022 18	1	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0498/G-11	08-11-2022	15-11-2022	18-11-2022	3979.20	161001425	09-11-2022	5.2	41.3	3720.76	9.9	40.7	3666	613
CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0500/G-11 09-11-2022 18-11-2022 4065.80 161001427 09-11-2022 5.8 34-4 426447 7.2 33-9 4201 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0502/G-11 10-11-2022 18-11-2022 18-11-2022 18-10-12022 5.3 34-2 4411.56 6.7 33.7 4346 CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0512/G-11 12-11-2022 18-	90	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0499/G-11	09-11-2022	15-11-2022	18-11-2022	4070.39	151001425	09-11-2022	6.3	33.6	4738.84	7.7	33.1	4176	611
CCUPICP/NTPC-IV/NABINAGAR/NBCC/0502/G-11 10-11-2022 15-11-2022 16-	0	CCL/PLCP/MTPC-IV/NABINAGAR/NBCC/0500/G-11	09-11-2022	15-11-2022	18-11-2022	4065.80	161001427	09-11-2022	89.5	34.4	4264.47	7.2	33.9	4201	611
CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0512/G-11 12-11-2022 16-11-2022 18	10	CCL/PLCP/MTPC-IV/NABINAGAR/NBCC/0502/G-11	10-11-2022	15-11-2022	18-11-2022	4051.50	161001429	10-11-2022	5.3	34.2	4411.56	6.7	33.7	4346	610
CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0513/G-11 12-11-2022 16-11-2022 3999.71 161001433 12-11-2022 5.5 34.4 4269.68 7.6 13.6 4775	11	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0512/G-11	12-11-2022	16-11-2022	18-11-2022	4039.90	161001434		5.2	36.5	4137.94	7.6	35.6	4083	611
	112	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0513/G-11	12-11-2022	16-11-2022	18-11-2022	3989.71	161001433	12-11-2022	50	34.4	4269.68	3.6	312	4175	110

245

**Grade as per the website of the Ministry of cost (www.cost.as/Ln/major-statistics/tool-grades)

Note:

(i) Sample collected as per FSA.

(ii) Youting Method forlowed - Adh. & Mobiture in per ASTM D-7562-IS & GCV as per ASTM D-5865-LS, EM in per IS LESO (Part-I): 1884 Roadfirmed 2013

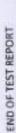
(iii) Sullaburish wilder has brem put in the bomb calcriment as determined in the laboratory following (ASTM D-629-LS).

De) None of the experiment is performed by external service provides.

IN) This report should not be replicated or reproduced. IN) The result related to the sample tested. Reserve part of the sample will be destroyed after three months

(Authorised Signatury) CSR-CIMITE, RC, NANOII (Dr. M.K. Spirit)





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TC-5897

Analytical results of coal samples collected by CSIR-CMSR (Third Party Sampling) during the period 03.11.2022 TO 15.11.2022

LOADING END ANALYSIS REPORT

12-2022			Analysed Grade **	613	411	611	610	612	611	612	611	613
Date: 30-12-2022	388	Equilibrated meisture basis (60% RH & 40°C)	GCV (keal/kg)	3693	4046	4137	4371	3954	4033	3904	4118	3633
5171	200	brated meisture (60% RH & 40°C)	ASHK	40.8	35.9	34.5	31.0	37.2	37.4	38.4	36.5	42.2
	stark:	Equilibra (SO	ğ	8.9	7.2	3.6	8.1	7.1	5.9	6.4	6.0	5.9
	Relative Humidity of laboratory.	pasis	GCV (krai/kg)	1760.48	4168.32	4270,83	4513.70	4064.23	4083.95	3978.84	4170.43	1714.39
	Relative III. Temperatu	Air-dried basis	ASH %	41.5	37.0	35.6	32.0	38.2	37.9	39.1	37.0	43.1
			ž X	5.1	4.4	4.6	52	4.5	4.7	4.6	4.8	3.8
		. 20	R.R. Date	04-11-2022	13-11-2022	14-11-2022	14-11-2022	14-11-2022	15-11-2022	16-11-2022	16-11-2022	16-11-2022
		Railway Rake/MGR	R.R.No./F. Note No.	161001417	161001435	161001438	161001439	161001439	161001440	161001444	161001441	161001441
		Rai	R.R. Quantity (Mt)	4020.60	4078.48	4067.00	3937.10		4026.59	3987.80	3967.00	0.0000000000000000000000000000000000000
-NBCC	Hydis -16, 12,3022 and Sample	Date of	receiving at laboratory	14-11-2022	22-11-2022	22-11-2022	22-11-2022	22-11-2022	22-11-2022	22-11-2022	22-11-2022	22-11-2022
Nower Utilitie-NTPO	Power Utility-NTPC-NBCC Date of start of analysis -16.12.2022 Product tested - Coof Sample		preparation	12-11-2022	18-11-2022	19-11-2022	19-11-2022	19-11-2022	20-11-2022	20-11-3022	20-11-3022	20-11-2022
			Date of collection	03-11-2022	13-11-2022	14-11-2022	14-11-2022	14-11-2022	15-11-2022	15-11-2022	15-11-2022	15-11-2022
THE STORY PROPERTY OF STORY OF	fest liegard No. Clarkfylder, Fragity Conf. or an experience of a conf. or an experience of a conf. or an experience of the co		Semple ID	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0483/G-12	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0515/6-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0522/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0523/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0523/G-12	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0529/G-11	CCL/PLCP/NTPC-JV/NAMINAGAR/NBCC/0531/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0532/G-11	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0532/G-12
CONTRACT.	Name of		허설	-	-	-	4	un	9	-	*	0
					2	43	3					

46 215

513

Analysed Grade **

**Coode as per the website of the Ministry of God (www.coal.nic.in/major-statistics/coal-graden, www.coal.gov.in/major statistics/coal-grades)

(ii) Teshing Method followed - Ash & Michane as per ASTM D-7382-15 & GCV as per ASTM D-5885-19, LM as per IS 1350 (Part-I): 1984 Realformed 2013. (iii) Supplies (s) where has been post in the beenth calculationates as determined in the laboratory following (ASTM D-4239-18). (iv) Nase of the aspectatory is performed by antennal service provider.

(u) The result related to the sample tested. Reserve part of the sample will be devictored after three months

realphos. (Dr. M.R. Saint) (Authorited Signatory) CSR-CMNT, RC, RANCH



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 28.12.2022 to 31.12.2022

LOADING END ANALYSIS REPORT

Date:03-03-2023

3 CCL/SLSP,	2 CCL/SLSP,	1 (CCL/SLSP)	247,	2	Test Report NoCIMITR/RNC/TPS/SSSP/NBCC/ Name of Coal Company. Central Coal Field Ltd. Loading Area/Milling-Shixpoor (Amarpali Area)
CCL/SLSP/NTPC-JV/NA8INAGAR/NBCC/1730/G-13	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1714/6-12	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1713/G-12	Sample ID		Test Report NoCIMER/RNC/TPS/SS.SP/NBCC/DEC/2002/29 Name of Cost Company- Central Cost Red Ltd. Loading Area/Halling-Shinpoor (Amarpali Area)
31-12-2022	29-12-2022	28-12-2022	collection	Date of	
31-12-2022 11-01-2023 14-01-2023 4056.14 141000098	28-12-2022 U9-01-2023 te-01-2023 4040-80 161001436	28-12-2022 09-01-2023 14-01-2023 4063-24	preparation	Date of	Power Utility- NTPC NBCC Date of start of analysis -28.0: Product tested - Coal Sample
14-01-2023	14-01-2023	14-01-2023	receiving at laboratory	Date of	Power Utility, MTPC NBCC Date of start of analysis -38.02.3023 Product tested - Coal Sample
4056.14	4045.80	4063.24	Quantity (Mt)	2	28
141000098	161001436	161001437	R.R.No./ F. Note No.	Reilway Rako/MGR *	
31-12-2022	28-12-2022	28-12-2022	R.R. Date	MGR *	
2.3	2.5	2.5	N N		
49.5	46.8	46.5	ASH %	Air-dried basi	Relative H. Tamperatu
3478.29	3620.93	3691.91	GCV (kcal/kg)	Nasis .	Humidity of laboratory ature of laboratory:
3.5	1.3	3.3	KW	Equilibri (60	atory
48.9	46.4	46.1	ASHS	brated moisture 60% RH & 40°C)	
3436	3591	3662	GCV (kcal/kg)	Equilibrated moisture basis (60% RH & 40°C)	355 362°C
613	613	613	Grade ***		6302763

^{**}Grade as per the website of the Ministry of osel (www.coml.nlc.in/major-statistics/cost-grades, www.cost-gov.in/major-statistics/cost-grades)

(Authorised Signatory) (SIR-CIMPR, RC, RANCH)

[Dr. M.K. Sain!)

[[]ii] Sample collected as per FSA.

⁽ii) Testing Method followed - Ash & Meisture as per ASTM D-7583-15 & GCV as per ASTM D-5865-15, EM as per 65.1850 (Part-I); 1964 Reaffrawd 2013 (Iii)Sulphan(s) value has been put in the bornb calorimeter as determined in the laboratory following (ASTM D 4229-15).

⁽N) None of the experiment is performed by external service provider.

⁽v) This report should not be replicated or reproduced.

⁽wi) The result related to the sample todayd. Reserve part of the sample will be destroyed effect three resetts.



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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 11.01.2023

LOADING END ANALYSIS REPORT

3-2023			Analysed Grade **	G12	612
Date:23-03-2023	35% 26.0°C	ure basis	GCV (kcal/kg)	3993	3961
_	m.n	brated moisture (60% RH & 40°C)	ASHE	41.8	41.9
	Auto	Equilibrated moisture basis (60% RH & 40°C)	× ×	4.3	4.4
	tive Humidity of laboratory perstary of laboratory:	sis	GCV (kcal/kg)	4059.60	42.7 4035.76
	Apparature of lab	Air-dried basis	ASH %	42.5	42.7
	.,96,3.	4	×	2.7	2.6
		GR.	R.R. Date	11-01-2023	11-01-2023
		lway Rake/M	R.R.No./ F. Note No.	161001439	161001440
		Rai	R.R. Quantity (Mt)	4036.20	4032.80
e mace	Power Utility-NTPC NBCC Date of start of analysis -96.03, 2023 Product histori - Coal Sample	Date of	sample ecciving at laboratory	20-01-2023	20-01-2023
	Date of start of analysis -06.03 Product tested - Coal Sample	Date of Sample R.R. R.R. No./ F. R.R. Date M.R.	18-01-2023		
	0.0.0		collection	11-01-2023	11-01-2023
And the second later of th	ratt hapott Nan-Cimbery, rankly if by SLAF yndach, janen daesk yn Namer of Coal Company - Central Coal Reld Ltd. Loading Area/Siding-Shluppor (Amarpail Area)		Sample ID	CCI/SLSP/NTPC-JV/NABINAGAR/NBCC/1788/G-12	CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1789/G-12
2000	Name	8	≢ <u>2</u> 45	1	

Customer Provided information

**Strate as per the website of the Ministry of coal (www.coal.nic.in/major-stadistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

(i) Sample collected as per PSA.

ii) Testing Method followed - Ash & Moisture as per ASTM O-7882-15 & GCV as per ASTM O-3885-19, EM as per GLISG (Part-I): 1984 Roaffirmed 2013 (si)Sulgiturite) value has been put in the bomb calcelments as determined in the laboratory following (ASTM D 4239-18); In) Note of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result militaid to this sample bastod. Reserve part of the sample will be destroyed after these months

248

612

CSIR-CIMFR, BC, RANCH (Dr. M.E. Saint) (Authorized Signatory)



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 30.01.2023

LOADING END ANALYSIS REPORT

Test Reg Name of Loading	insi Report NoCMFR/RNC/TPs/SLSP/NBCC/JAM/2023/32 fame of Coal Company- Central Coal Feed Ltd. pating Anna/Siding-Silvipoor (Amarypali Area)		Power Utility NTPC NECC Oate of start of analysis -O? Product tested - Coal Semy	Power Utility NTPC NBCC Oate of start of analysis -05.04,2023 Product tested - Caal Sample					Relative Hu Temperatur	Relative Humidity of laboratory: Temperature of laboratory:	whomp
7				Date of	8	Railway Rake/MGR *	ign.	4	Air-dried basis	sise	Equili
<u>i</u> <u>j</u> 2.	Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	B.R. Quantity (Mt)	R.R.No./ F. Note No.	R.R. Date	8	ASH %	GCV (kcal/kg)	N.
4	Col for Charter and Secretary and Secretary							-	Contract of the last		

CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/1927/G-13 30-01-2023 09-02-2023 11-02-2023 3683.37 161001444 30-01-2023 4.4 37.9 4315.16

** Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/lose) grades, www.coal.gov.in/major-statistics/losei-grades)

(i) Sample collected as per FSA.

(ii) Testing Method followed - Ash & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Part-I): 1984 Reaffirmed 2013 (RI)Sulphor(s) value has been put in the bomb calculaneter as determined in the laboratory following (ASTM D 4239-18).

(N) Name of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The rouck released to the sample based. Reserve part of the sample will be destroyed other three months.

CSIR-CIMPR, RC, RANCHI (Authorized Signatory) (Dr. Madhu tha)

249

010

37.8

4.7

Grade ** Analysed

> (kcal/kg) 4302

ASH%

×

S

Equilibrated moisture basis

(60% RH & 40°C)

Date:11-04-2023



सीएसआईआर-केंद्रीय खनन एवं ईपन अनुसंपान संस्थान अनुसंपान केंद्र, रांची ,पोस्ट-नामकुम, रांची -834010 CSIR-CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI-834010



TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 02.03.2023

LOADING END ANALYSIS REPORT

Date:15-05-2023

1 CCL/SLSP/NTPC-D	250,		Test Report NoCMFR/RMC/TPS/SLSP/NBCC/MAR/3023/34 Name of Cost Company- Central Cost Held Ltd. Loading Area/Stding-Shivpoor (Amarpali Area)
CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/2152/G-12 02-03-2023 18-03-2023 20-03-2023	Sample ID		/TPS/SS.SP/NBCC/WAR/3023/34 tesl Coal Field Ltd. rr (Amarpali Area)
02-03-2023	Date of collection		
18-03-2023	Date of preparation		Prower Utility- WTPC NBCC Date of start of analysis -1: Product texted - Coal Sam
	receiving at laboratory	Date of	MTPC NBCC of analysis -11.05.202 d - Cosi Sample
3902.00	Quantity (Mt)	Ra	
161001447	R.R.No./ F. Note No.	Railway Rake/N	
3902.00 161001447 02-03-2023	R.R. Date	iGR*	
3.0	M %	>	
44.6	M% ASH%	Air-dried basi	teletive Hu
44.6 3918.41 3.3	GCV (kcal/kg)	asis	tive Hurridity of labor penature of laborator
3.3	M%	Equilibra (60	il specki
44.5		(60% RH & 40°C)	COOK!
3906	GCV (kcal/kg)	Equilibrated moisture basis (60% RH & 40°C)	37%
612	247	Analysisch	

Customer Provided Information

[Dr. M.K. Saini]
[Authorized Signatory)
CSIR-CIMPR, RC, SANCH

[&]quot;Grade as per the website of the Ministry of coel (www.coel.nic.in/major-statistics/coel-grades, www.soel.gov.in/major-statistics/coel-grades)

⁽i) Sample collected as per FSA.

¹¹ Testing Method followed - Ash & Moisture as per ASTM D-7982-15 & GCV as per ASTM D-5865-19, LM as per IS 1350 (Part I): 1984 Reaffirmed 2013 (H)Sulphur(s) value has been put in the bomb calorimeter as determined in the lahoratory following (ASTM D 4230-18).

⁽v) Name of the experiment is performed by external service provides.

⁽v) This report should not be replicated or reproduced.

⁽w) The result related to the sample tested. Reserve part of the sample will be destroyed after three musths



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 05.03.2023

LOADING END ANALYSIS REPORT

Name of Coal Company: Central Coal Field Ltd. Test Report No.-CIMER/RWC/TPS/SLSP/NBCC/MAR/2023/35 Loading Area/Siding Shivpoor (Amargali Area)

> Date of start of analysis -16.05 2023 Product tested - Coal Sample Power Utility- NTPC NBCC

Temperature of laboratory: Relative Humidity of laboratory:

Date:18-05-2023

	100	100	
4044,40	4037.60	R.R. Quantity (Mt)	-
161001449	161001448	R.R.No./ F. Note No.	Railway Rake/MG
05-03-2023	05-03-2023	R.R. Date	GR.
2.3	2.2	3	
44.4	45.3	ASH %	Air-dried basi
3910.22	3870.01	GCV (kcal/kg)	basis
4.0	3.8	M%	(60
43.6	44.6	ASH%	3% RH & 40"
3842	3807	GCV (kcal/kg)	i0'C)
G12	612	248	Analyzad

CCL/SLSP/NTPC-JV/NABINAGAR/NBCC/2183/G-11

Sample ID

collection

preparation

receiving at laboratory

Date of

sample Date of

05-03-2023 21-03-2023 25-03-2023 4044,

21-03-2023 25-03-2023 4037.

05-03-2023

CSIR-CIMFR, RC, RANCHI (Authorized Signatory) (Dr. Madtu hu)

Customer Provided Information CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/2184/G-11

^{**}Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

⁽i) Sample collected as per PSA.

[[]II] Testing Method followed - Ash & Moisture as per ASTM D-7982-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Part-I): 1398 Reaffirmed 2013 [iii]Sulphur(S) value has been put in the bomb calorimeter as determined in the laboratory following (ASTM D 4239.18).

⁽iv) None of the experiment is performed by external service provider.

⁽v) This report should not be replicated or reproduced.

⁽vi) The result religied to the sample tested. Reserve part of the sample will be destroyed after three muritis.



सीएसआईआर-केंद्रीय खनन एवं ईंधन अनुसंधान संस्थान अनुसंधान केंद्र, रांची ,पोस्ट-नामकुम, रांची -834010

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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 21.03.2023

LOADING END ANALYSIS REPORT

	1	K	52	io.	Test Re Name o Loading
Customer Provided Information	CCL/SISP/NIPC-IV/NABINAGAR/NBCC/2267/G-12	CCL/SLSP/NTPC-IV/NABINAGAR/NBCC/2266/G-12	Sample ID		Test Report NoCRMFK/NKC/TRN/SLSP/NRCC/NAMF2023/37 Namu of Coal Company. Central Coal Feld (tal. Loading Area/Milling-Shinpoor (Amarpati Area)
	21-03-2023	21-03-2023	collection	Date of	
	21-03-2023 30-03-7023 03-04-2023 4026-80 151001453	30-03-2023	preparation receiving a	Date of	Power Usiley, NTPC NBCC Date of start of analysis -23.6 Product tested - Coal Sample
	03-04-2023	03-04-2023	receiving at laboratory	Date of	Power Usliky NTPC NBCC Date of start of analysis - 23-25-2023 Product Noted - Coal Sampin
	4026,80	4065.37	R.R. Quantity (Mt)	2	CE .
	161001453	161001452	R.R.No./ F. Note No.	Railway Rake/MGR *	
	21-03-2023	21-03-2023	R.R. Date	AGR *	
	1.7	1.7	\$	-	
	46.2	46.7	ASH %	Air-dried basis	Relative H Tamperatu
	3818.59	3779.55	GCV (kcal/kg)	basis	fative Humstry of laboratory imperature of laboratory:
	3.4	C	ş	Equilibra (66	storp
	45.4	45.9	ASHN	60% RH & 40°C)	
	3753	3718	GCV (kcal/kg)	Equilibrated moisture basis (60% RH & 40°C)	Date:25-05-2022 36% 28.5°C
	612	612	Grade ***		05-2023

""Grade as per the website of the Minshry of toal (naww.toal.rst.in/major-statistics/coeigrades, wow.toei.gov.in/major-statistics/coeigrades) Note:

(i) Sample collected as per FSA.

(HDSulphur(s) value has been put in the bomb calorimeter as determined in the Saboratory following (ASTMID 4259-18). (8) Testing Meritad followed - Ash & Melatura as per ASTM D-7523-15 & GCV as per ASTM D-5865-15, EM as per IS 1850 (Part-1): 1994 Reafferned 2013

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three stooths.

(Dr. Madhu Ihu) (Authorized Sgnanory) CSR-CIMFR, RC, RANCH

253

612 611

3939

5.2

37.1 39.7 39.9

Analysed Grade **

(hcal/kg)

900

ASHIK

MAN

Equilibrated moisture basis

(60% RH & 40°C)

Date: 10-02-2023

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TC-5897

Analytical results of coal samples collected by CSIR-CINER (Third Party Sampling) during the period 07.12.2022

LOADING END ANALYSIS REPORT

Relative Hamidity of laborate Temperature of laboratery:	Air-dried basis	M.Y. ASH X. (Real/Ng)	4.6 37.7 4153.37	4.5 40.0 3968.23
Price / West Common Product of Start of analysis 477 (2003) Cost Red Util, Product tested - Cost Sample	3R.*	R.R. Date	07-12-2022	07-12-2022
	Rallway Rake/MGR.*	R.R.No./ F. Note No.	2483.10 161001464 07-12-2022	161001464 07-12-2022
	2	R.R. Quantity (Mt)	2483.10	1589.49
	Date of	sample receiving at laboratory	24-12-2022	24-12-2022
		Date of preparation	07-11-2022 23-12-2022	23-12-2022
		Date of collection	07-12-2022	07-12-2022
Test Report NoCMEN(HNC/TPS/PUCP/NNCC/DEC/2022/40) Name of Coal Company- Central Casi Reld Ltd. Loading Aves/Siding-PHLISA(SIA)		Sample ID	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0645/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0645/G-12
arre of		zi gi	20	0

* Customer Provided information **Strade as per the website of the Ministry of coal (inwaw coal als. Infringio-statistics/coal-grades, www.coal-gov.infringior-statistics/coal-grades)

(i) Sample collected as per FSA.

(II) Testing Method followed - Ash & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, EM as per IS 1350 (Part-IJ: 1984 Resiftened 2013 (II) Sulphysis) value has been put in the bond calorimeter as determined in the laboratory hollowing (ASTM D-4239-18).

(N) Noise of the experiment is performed by external service provider.

(A) This report should not be registrated or reproduced.

(A) This report should not be registrated or reproduced.

(A) The result related to the somple tested. Reserve part of the sample will be destroyed after three months.

(Dr. M.K. Saint) (Authorbad Sgratony) CSR-CMHT, RC, BANCH



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 06.01.2023 TO 14.01.2023

LOADING END ANALYSIS REPORT

													Date 305-04	
Name Name	Test Report No. CIMPR/RNC/TPS/PICP/NBCC/JAM/2022/45 Name of Cost Company. Certrial Cost Faid Ltd. Loading Arm/Stiding-Pitts/BASIA.		Power Utility-NTPC-NBCC Date of start of analysis -18.09 Product tested - Coal Samela	Power Utility-NTPC-MBCC Date of start of analysis -18 09:2023 Product tested - Coal Samela					belative Hu Temperatur	Relative Hamidity of laboratory.	atory.		48K BAT	
		1		Date of	2	Railway Rake/MGR	IGR *		Air-dried basis	sasks	Equilibra (60	brated moisture (60% RH & 40°C)	Equilibrated moisture basis (50% RH & 40°C)	
≢ 2 51	Sample ID	Date of collection	Date of preparation	sample receiving at laboratory	R.R. Quentity (Mt)	R.R.No./F. Note No.	R.R. Date	*	ASH %	GCV (Accel/Agg)	MS	ASH%	GCV (kcal/kg)	
-	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0793/G-11	06-01-2023	27-01-2023	28-01-2023	3448.65	161001477	161001477 07-01-2023	3.5	36.1	4389.97	5.5	35.4	4299	
N	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0821/G-11	12-01-2023	04-02-2023	08-02-2023	4044.40	161001478	13-01-2023	4.4	37.8	4147,45	6.4	37.0	4061	
m	CCL/PLCP/NTPC-IV/NABINAGAR/NBCC/0826/G-11	14-01-2023	06-02-2023	08-02-2023	3193.40	161001479	14-01-2023	5.2	34.9	4304,37	7.4	34.1	4204	_
4	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0826/G-12	14-01-2023	06-02-2023	08-02-2023	831.20	161001479	161001479 14-01-2023	4.4	41.3	3762.02	5.3	40.9	3727	_

611

611

Grade *

Analyse

Date :05-04-2023

611

G12

(Authorized Signatory) CSIR-CMFR, RC, RANCH Dr. Madhu ha

* Customer Provided Information

**Grade as per the website of the Ministry of cost (www.cost.nic.in/major-statistics/cos+grades, www.cost.gov.in/major-statistics/cos+grades)

(III)Suightur(s) value has been put in the borsh calorimeter as determined in the laboratory following (ASTM 0 4239-18).

None of the experiment is performed by outcoms service provider.
 This report should not be replicated or reproduced.
 This report should not be replicated or reproduced.
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END OF TEST REPORT

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Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 28.01.2023

LOADING END ANALYSIS REPORT

or/nacc/Jaw/2023/49 si Frede Utd. Sample ID Collection	MAGAR/NBCC/0903/G-11 28-01-2023 15-02-2023
set Report NoCIMPR/NBIC/TPS/PLC7/NBIC/ Name of Coal Company. Central Coal Feel Li ceding Area/Sading-PHULBASIA Sample 527.0	XL/PLCP/NTPC-JV/NAB

**Grads as par the website of the Ministry of coal (www.coal.nic.ln/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades) * Customer Provided Information

(il Sample collected as per FSA.

(IQ Testing Method followed - Ash & Moisture as per ASTM D-7582-15 & GCV as per ASTM D-5865-19, EM as per 15 1350 (Part-II): 1984 huaffirmed 2013

(HSubharts) value has been put in the bomb calculmeter as determined in the laboratory following (ASTM D 4239-18).

(N) Name of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed ofter three months.

5.10 Hadred

D 115

612

3956

36.0

7.0 6.7

37.1 38.7

4.2 4.2

37.7

Grade ** Analyse

900

Equilibrated moisture basis

Air-dried basis

(60% RH 8, 40°C)

25.270

43%

Relative Humidity of laboratory: Temperature of laboratory (kcsi/kg)

ASH%

ž

(Brcst/kg) 4186.36 4062.19

ş

ASH %

W %

Date 17-04-2023

(Authorited Signatory) CSR-CIMPR, RC, RANCH (Dr. M.K. Saint)



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 29.01.2023 TO 18.02.2023

LOADING END ANALYSIS REPORT

	n		4		1		-	2	256		Position 1	Test Rep Marine o
COLUMN COLUMN CONTRACTOR AND COLUMN COLUM	CTI/BICB/NTBC.IV/NAMINAGAB/NBCC/1009/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/1004/G-11	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0979/G-12	CCI/PICP/NTPC-JV/NABINAGAR/NBCC/0973/G-11	CCL/PLCY/NIPCJY/NABINAGAN/NBCC/0903/9-14	the contract of the contract o	CCL/PICP/NTPC-IV/NABINAGAR/NBCC/0907/G-12		Sample ID		Losing Area/Dating PHULLIADIA	Test Report NoCHNFR/RNC/TPS/PLCP/NBCC/IAV-FEB/2023/52 Rame of Cool Company - Central Coal Field Ltd.
18.00.0003	18-02-2023	16-02-2023	12-02-2023	10-02-2023	C202-20-40	200 00 3033	29-01-2023		Date of collection	N. O. O.		
04-03-2023	06-03-2023	05-03-2023	02-03-2023	C202-C0-T0	CENT 60 10	31.03.3033	16-02-2023	200000000000000000000000000000000000000	Date of preparation	distance of the same	The same of the sa	Fower Utility MTPC NBCC Date of start of analysis of
06-03-2023 07-03-2023	07-03-2023	07-03-2023	07-03-2025	03/03/00/10	07.03.3030	24-02-2023	22-02-2023		receiving at laboratory	Date of	-	Fower Utility MTPC NBCC Date of start of analysis -17.04.2023
1044.40	3057.60	4030.40	1520.82		2507.00	959.72	1048.80	Arrest	Quantity			2
161001498	151001498	161001497	OCETONIST	300,100,100	161001495	161001490	161001486		R.R.No./ F. Note No.	or described & gradual	Salbana Bake/MGR *	
18-02-2023	18-02-2023	17-02-20-23	CCOC 00 21	12.02.2023	10-02-2023	04-02-2023	29-01-2023		R.R. Date		G. *	
4.6	3,/			27	3,5	3.0	3.3		8			100071
40.6	20,0	20.0	200	39.3	38.5	41.8	34.3		ASH %		Air-dried basis	telative H
3828,92	40.000	4148 50	4327.08	4072.30	4135.19	3882.57	1	ATTIA AG	GCV (kcal/kg)		basis	relative Humidity of fationatory:
5.6		6.6	7.2	6.5	6.0	7.00	3	7.1	N.	190	Equilibr	Morris .
33.0	200	17.1	34.3	38.2	37.5	400-	an a	34.3	ASH%	0.00 to 10.00	brated moisture	
2476	2740	4023	4185	1954	8706		1722	4143	GCV (kcal/kg)	1	Equilibrated moisture outst	25.5C
-	612	611	611	27.0	911	200	612	611	253	Analysed		

Customer Provided Information

(Dr. M. K. Saini.) (Authorised Signatory) CSR-CMSR, RC, RANCHI

^{**}Grade as per the website of the Ministry of coal (www.coal.nic.in/major-statistics/coal.grades, www.coal.gov.in/major-statistics/coal-grades)

⁽i) Sample collected as per FSA.

⁽iii) Testing Method followed - Ach & Noisture as per ASTM D-7982-15 & GCV as per ASTM D-5865-13, EM as ger IS 1350 (Part I): 1914 Reaffirmed 2013 (BillSulphur(s) value has been gut in the bomb calorimeter as determined in the laboratory following (ASTM D-4239-13).

⁽N) None of the experiment is performed by external service provider.

 ⁽v) This report should not be replicated or reproduced.
 (vi) This result related to the sample tested. Reserve part of the sample will be destroyed after three months.



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 10.02,2023 TO 12.02,2023

LOADING END ANALYSIS REPORT

1/2023/54			
/NBCC/FE	#Field Ltd.		
C/TPS/PLC	entral Coal	MASIA	
CIMPRINE	mpany- D	ding-PHULBA	
sport No.	se of Coal Co	ng Avea/Si	
Test P	Name	Loads	

254

Date of start of analysis -28.04.2023 Product tested - Coal Sarryle Power Utility-MTPC-NBCC

Temperature of laboratory:

* =	5000		_
rated moist 60% RH & 4	ASHS	38.0	38.2
Equilibr (6	ž	6.3	6.3
pasis	(Bry/jesy)	4095.88	4122.69
Air-dried basis	M% ASH%	39.1	39.4
3	×	3.7	3.3
GR.	R.R. Date	10-02-2023	12-02-2023
tailway Rako/MGR *	R.R.No./ F. Note No.	161001495	2484.08 161001496 12-02-2023
28	R.R. Quentity (Mt)	1529.20	2484.08
Date of	sample receiving at laboratory	07-03-2023	07-03-2023
	Date of preparation	01-03-2023	02-03-2023
8	Date of collection	10-02-2023	12-02-2023
	Sample ID	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0973/G-12	CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/0979/G-11

Grade *

Ş

sture basis

10,01

35.8'C

\$11%

Relative Humidity of laboratory:

(kcal/kg)

Date:15-05-2023

512

3985

3995

* Cestomer Provided Information

**Grade as per the website of the Ministry of coal (www.coal.ais.in/major-statistics/coal-grades, www.coal.ais.in/major-statistics/toal-grades)

(i) Sample collected as per FSA.

(ii) Testing Method followed - Ash & Moisture as per ASTM D-7587-15 & GCV as per ASTM D-5865-13, EM as per IS 1850 (Part-I): 1964 Reaffrmed 2013

(iii)Sulphuris) whue has been put in the tomb calorimeter as determined in the laboratory following (ASTM D 4219-18).
(iv) Nans of the experiment is performed by external service provides.
(v) This report should not be nepforted or reproduced.
(v) This report should not be nepforted or reproduced.
(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Authorised Signatory) CSIR-CIMFR, BC, RANCHI (Dr. M. K. Saint)



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 19.02.2023

LOADING END ANALYSIS REPORT

Date:04-05-2023

1	458°		Name Laadk
CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/1021/G-11	Sample ID		Two Report NoCIMER/BWC/TPS/PLCP/NBCC/PER/2023/53 Name of Coal Company - Central Coal Field Ltd. Loading Area/Siding-PHULBASIA
19-02-7023 10-03-2023 13-03-2023 3981.00 163001499	collection		
10-03-2023	preparation	20	Power Unitty-NTPC-NBCC Date of start of analysis -03.0 Product tested Coal Sample
13-03-2023	receiving at laboratory	Date of	Power Utility-NTPC-NBCC Date of start of analysis -03.05.2023 Product tested - Coali Sample
3981.00	R.R. Quantity (Mt)	2	
161001499	R.R.No./ F. Note No.	Railway Rake/MGR *	
20-02-2023	R.R. Date	IGR *	
3.1	×		
40.8	ASH %	Air-dried basis	Relative H
3942.10 6.5 39.4	GCV (kcal/kg)	basis	elative Humidity of laboratory: emperature of laboratory.
6.5	ş	Equilib	whork
39.4	ASH%	60% RH & 40°C	
3804	GCV (kcal/kg)	40°C)	NES NES
612	255		

[&]quot;"Grade as per the website of the Ministry of cool (www.cool.nic.in/major-statistics/coal-grades, www.coal.gov.in/major-statistics/coal-grades)

258

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(vi) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(Dr. M. K. Saini) (Authorised Signatory) CSR-COMFR, RC, SANCH

END OF TEST REPORT

⁽ii) Finiting Method followed: - Ash 8, Moisture as per ASTM 0-7582-15 8, GCV as per ASTM 0-5805-19, EM as per IS 1350 (Part-I): 1984 Reaffirmed 2013 (EDSulphun(s) value has been put in the bornb calorimeter as determined in the laboratory following (ASTM 0-4239-18). (i) Sample collected as per FSA.

72		Instrument MAC:	00:60:0C:85:11:94	
Sample ID:	T-58445	Date:	Thu May 25 13:04:13 2023	
Method:	Dynamic	Type:	Final	
Mode:	Determination	Bomb ID:	1	
nitial Temp:	29.9394	EE Value:	934.240	
acket Temp:	30.0085	Temp, Rise:	4.7780	
Veight:	0.9990	Spike Weight:	0.0000	
Fuse:	20.0000	Acid:	8.0000	
Sulfur:	0.5600			
Units Multiplier:	1	Gross Heat:	4397.58	
		Units:	cal/q	

CCL | PLCP | NTPC-54 | NABINA CAR | NBCC | 1126 | C-11



RESEARCH CENTRE - RANCHI, POST - NAMKUM, RANCHI- 834010 CSIR- CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH सीएसआईआर-केंद्रीय खनन एवं ईंधन अनुसंधान संस्थान अनुसंधान केंद्र, रांची ,पोस्ट-नामकुम, रांची -834010



Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 18.03.2023

LOADING END ANALYSIS REPORT FOR TOTAL MOISTURE

Date: 29-05-2023

Test Report No.-CIMFR/RNC/TPS/PLCP/NBCC/MAR/2023/56

26 Quding Area/Siding PHULBASIA

SI.

No. Name of Coal Company- Central Coal Field Ltd.

Date of start of analysis - 25.05.2023 Power Utility-NTPC-NBCC

Product tested - Coal Sample

	18-03-2023	3965.40 161001502 18-03-2023	3965.40	07-04-2023	18-03-2023 02-04-2023 07-04-2023	18-03-2023	6/G-11
5001	R.R. Date	R.R.No./ F. Note No.	R.R. Quantity (Mt)	receiving at laboratory	Date of preparation	Date of collection	
	GR *	Railway Rake/MGR	Ra	Date of			

(Authorized Signatory)
CSIR-CIMFR, RC, RANCHI (Dr. M. K. Saint)

11.4

(iv) This report should not be replicated or reproduced.

(v) The result related to the sample tested. Reserve part of the sample will be destroyed after three months.

(ii) Testing Method followed - Total Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2013

(iii) None of the experiment is performed by external service provider.

Sample collected as per FSA.

Customer Provided Information

CCL/PLCP/NTPC-JV/NABINAGAR/NBCC/1126

Sample ID

END OF TEST REPORT

TM%



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TC-5897

Analytical results of coal samples collected by CSIR-CIMFR (Third Party Sampling) during the period 18:03:2023

LOADING END ANALYSIS REPORT

Loading Arms/Siding Phillipsia Marrie of Coaf Company. Central Coal Field Ltd. Test Report No.-CRMFR/RNC/TPS/P1CP/NBCC/MAR/2023/56 CCL/PICP/NTPC-JV/NABINAGAR/NBCC/1126/G-11 Sample 1D 18-03-2023 collection Date of Product techni - Coal Sarrylle Data of start of analysis - 25.05.2023 02-04-2023 preparation Ower DIRRY-NIPC-MRCC Date of 07-04-2023 receiving at laboratory sample Date of Quantity 3965.40 OM Railway Rake/MGR * 161001502 18-03-2023 R.R.No./F. Note No. R.R. Date 4.2 N 35 Air-dried basis Temperature of laboratory Rebove Hurridity of laboratory: 34.8 W HSW 4397.58 (kral/kg) GCV Equilibrated moisture basis 3 7.6 (50% RH & 40°C) ASH% 33.6 9 Date:29-05-2023 (hcal/kg) 4242 Grade 258d 113

Customer Provided Information

261

"Grade as per the wetsate of the Missisty of coal (seem coal sic is/insportstitics/coal-grades), www.coal.gov.io/insportstitics/coal-grades)

(I) Sample exhibited as per FSA.

(H)Sulphur(s) value has been put in the borst calorimeter as determined in the laboratory following (ASTM D 4299-18). [10] Testing Method followed - Auh & Mostore as per ASTM 0-7582-15 & GCV as per ASTM D-5865-19, DM as per IS 3310 (Part-I): 2594 itentificant d 2013

(iv) None of the experiment is performed by external service provider.

(a) This report about from the replicated or reproduced.

[vi]. The result related to the conside tested. Reserve part of the sample will be destroyed after three mostly

(Authorized Signatury) CSB-CIMER, RC, RAWCHI (Dr.M.K. Saint)



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(वैद्यानिक नया अंद्योगिक अनुसदान परिषद्)

बरवा रोड,धनबाद - 826 ०१५, झारखण्ड, भारत

एक आई एम औ 9001 प्रमाणित संस्थान

(Council of Scientific and Industrial Research) Barwa Road, Chenbad - 826015, Jharkhand, India An ISO 9001 Certified Institute





Date of issue : 18.07.2022

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/IPS/LD/JUL/22-23/7904 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Utility- NBCC Duration of Performance of Analysis: 13,07,2022 to 16,07,2022

Relative Humidity of laboratory(%): \$2.0

Temperature of laboratory(°C): 24.7 Equilibrated mainters basis (60) sample BRA 4FC) Date of Promitting at 52. No ocy Grade OCV 1 TPS/40528 (Kentike 22.06.2022 05,07,2022* ASSES 68,07,2022 001398 5.3 40,5 3742.65 7.7 39.5 3648 G13 2 TPS/40531 23.66.2022 04.07.2022* 08.07.2022 501401 6.8 40.4 3656.23 7,8 40,0 3617 G13

N.B.*Defay in sample preparation at loading size.

Note:

(i) Sample collected as per FSA,

Ash.A. Moisture as per IS 1350 (Part-1), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

(Signature and Designation of Authorized Signatory)

द्वी आसीच मुखार्जी the Ashish Makhacjee मुका वैज्ञानिक Chief Scientist मी॰ एतः आई॰ आर॰ - केडीय कान एवं ईंधन अनुसंधान संस्थान CSIR-Central Institute of Mining & Fool Research Gert. Of India, Dissolut

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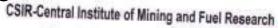
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(बेहानिक तथा ओवॉलिक अनुसंधार परिषद) बरवा शेंड,पनबार - 826 015, झारखण्ड, मारत हरू आई एस ओ १००१ प्रमणित संस्थान



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Date of issue :: 30.06.2022

LOADING END ANALYSIS REPORT

Test Report No. CIMFR/DHN/TPS/LD/JUN/22-23/7385 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Louding Area/Siding-SPUS-2, JNT Name of Power Utility-NBCC Duration of Performance of Analysis : 27.06.2022 to 29.06.2022

Relative Humidity of laboratory(%); 54,0

1 10				Date of		Sway Rabe N	ICH.		Air-deted by	ode .		nd maintain Her & Herc	basis (sets.	1
St. No.	Sample III	Date of redepisor	Date of preparation		Quantity	RRNs/	Serve-syr		-	GCV			0.00	Analysis Grade
				Scherostory	(Mi)	F. Nete No.	R.H. Date	26.54	ASSTE	(Kratike)	MMG	ASBns.	(Kod/kg)	
1	TPS/36733	07,66,2622	16,06,2022*	22.06.2022		002256		5,7	41.3	3826.31	6.0	41.2	23/25/1	1000 N
4	TREGUENE		SECTION 1				-	_			10.17	46.4	3814	G12
-	17 (478133	49/99/5955	16.06.2022*	22,06,2022		002258	1 (1	6.8	32.8	4527.12	7.3	32.6	4503	G10

N.S.*Deloy in sample preparation at loading site.

Note:

(i) Sample collected as per FSA.

(ii) Ash,& Monture as per IS 1380 (Part-1), 1984 Reafficined 2019/ ASTM D 7882-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider,

(v) This report should not be replicated or reproduced.

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डॉ॰ अशोक कुम्दर सिंह / Dr. Ashak No. Singb प्रमुख अनुसंधन समुद्र, संस्थ्यन भुगवता आकरान विभाग / HORG, ROA Desiran & Troject Leader ती। एस॰ आई। अप्तर- केन्द्रीय काग्य एवं ईपन अनुसंधान संस्थान CSSE-Cretral luniness Of Mining & Fael Research

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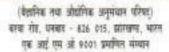
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Date of issue : 12.04.2023

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Test Report No.- CLMFR/DHN/TPS/LD/APR/23-24/1412 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Unity-NBCC Duration of Performance of Analysis: 05.04.2023 to 11.04.2023

Relative Humidity of inheratory(%): 55.0

Anetrie	hade retry.	ad maintain RN & 40°C		nii	tic dried to			Raidway Rakai MG		P 3				
Grade	GCV (Keshigt	ASHS	30%	GCV (Kothy)	ASSES	Min	R.R. Date	E.R.Ne./ E. Note No.	RIE Quantity (Mt)	Date of sample receiving at Salteratory	Date of properation	Date of collection	Sample III	53. No
G11	3861	36.3	8.0	3953.38	37.2	5.8		002027		21.0L2623	15.02.3023	H1.62.282A	TPS/90498	1
GU	3999	35.3	8,2	4116.82	36.8	4.3		(60)0032		21.02.2023	16,02,2023	8132,3823	TPS/90504	2
G10	4309	30.6	8,7	4399.16	31.2	6.8	1	993836		31,02,2023	16/02.2023	63.02.3923	TPS/90509	3
GII	4256	31.5	8.4	4405.05	32.6	5.2		002039		11.02.2023	16.82,2023	84.02.5033	TPS/90513	
GH	#366	33.4	8.4	4159.21	34,4	6.3		062844 A		21.82,2923	17,62,3628	05.81.2023	TPS/W/520	5
Gti	4191	38.1	5.5	4235.02	35.5	4.5		002044 H		21,02,2023	17.62.2838	MS.62.2923	TPS/90521	6
GU	3997	37.5	7.1	4094.45	38.5	4.6	- 1	002048	9 1	21,92,3023	18.02.2013	96.82.2823	TPS/90526	7
GH	3923	36.5	7,6	4016.56	37,4	5.4		002152 A		21.02.3025	19.01.3013	07.60.3003	TPS/9831	8
GI	3718	39.0	7,5	3862,98	40.5	3.9		982052 H		21.02.2023	(9,02,202)	67.62.3623	TFS/90532	9

(i) Sample collected as per FSA.

(ii) Ash & Mointure as per IS 1350 (Part-I), 1984 Reaffirmed 2019/ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) Name of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

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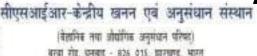
Bi- Stelle gatt fift / Dr. Ashok Kr. Singh प्रमुख त्रमृत्यान समृद्र, संसाधन गुणवान आकान विकास / HDRG, RQA Olvision & Project Lander तीन राजन आहेन आरम-संस्कृति बासन एवं क्षेप्रस असूत्रीयात संस्थात CSIR-Central Institute Of Mining & Fool Research Gest, Of India, Disasted

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Date of issue: 18.05.2023

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Test Report No. - CIMFR/DHN/TPS/LD/MAY/23-24/5827 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Leading Area/Siding-KHADIA, KHADIA WHARFWALL (JRD) Name of Power Utility-NBCC Duration of Performance of Analysis : 28.64,2023 to 17.05.2023

> Relative Hamidity of Inboratory (%): 54.0 Temperature of laboratory(*C): 24.0

			0	oran vario	Re	ideny Rako Y	IGR		Air-dried be	169	Equilibrat	d moissure BH & APC	Basis (60%)	Seatyses
SL No.	Sample (II)	Date of reflection	Oute of proporation	Date of sample receiving at laboratory	Quantity	R.R.No.: F. Nate Na.	R.R. Date	91%	ASSES	GCV (Kralky)	M%	ASIPS.	GCV (Knithg)	Grade
1	TPS:97570	20.03.2023	22.03.2023	12,03,2023		001219		1.2	49.7	4975.74	5.4	39.8	3983	612

Notes

(i) Sample collected as per FSA.

(ii) Ash, & Moisture as per 1S 1350 (Part-1), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

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the series your fire / Dr. Ashok Kr. Singh ups agran neg, samue ipmet unser from / HORG, RQA Division & Project Leader सीर एक आई० अत्रन-बेजरीय सन्तर एवं ऐपर अपूर्वात्तर संस्थात CSIR-Central Institute Of Mining & Fuel Research Govt. Of India, Dhanked P.O.- F.R.L. PIN-828108, Jhurkhand

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Date of issue: 11.01.2023

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/LD/JAN/22-23/16793 A Name of Cool Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Utility- NBCC Duration of Performance of Analysis: 02.01,2023 to 09.01,2023

Relative Humidity of laboratory(%): 53.0 Temperature of laboratory(°C): 23.0

					20			- 0	Liv-dried by		Equilibrate	E meioture RH A 40°C		Audyord
2000	(E) V. Genteck	Date of	Date of	Date of sample receiving at laboratory	RR Quantity (Mrs.	R.R.Na./ E. Nam. No.	Sen.	M %	ASHT	GCV (Krat/kg)	50%	ASH%	corv (KodSa)	Grade
St. No.	100	ostection 05.11.2022	19.11.2022*	23.11.2022		001742 A		5.3	47.4	3284,56	7.4	46.3	3212	G14
1	TPS/0/843	1200000000	Well for the second	- 25		001741 H		4.4	44.7	3637,59	7.4	43.3	3523	G13
2	TPS/69844	08,11,7022	19.11.2022*	23.15.2022		965762.0	-	-	-			47.5	2957	G15
3	TPS/69847	06.11.2922	26,11,2022*	23.11.2922		001744 A		8.3	47.1	2934.31	7.6	43.5	4991	GIS
100	TPS/69848	86.11.2022	20.11.2022*	23.11.2022		091744 B		7.6	40.8	3612.11	8,3	40.5	3585	G13
4	Trausoto					961747 A		6,6	39.3	3745,80	8.1	38.7	3686	G13
5	TPS/69853	67.53.2022	21,11,2022*	23.11,2622		Dell'in M		100	1000	Document	70.95	7000	200	G14
6	TPS/69854	87.31.2022	21.11.2022*	23,11,2022		001747 B		6.5	44.0	3492.19	7.5	43.5	3366	3514

N.B.*Delay in sample preparation

Nobe

(i) Sample collected as per FSA.

(ii) Ash,& Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

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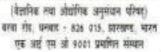
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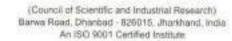
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सीएसआईआर-केन्द्रीय खनन एवं अनुसंधान संस्थान







Date of issue: 25,01,2023



LOADING END ANALYSIS REPORT.

Test Report No.- CIMFR/DHN/TPS/LD/JAN/22-23/18307 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHENGURDA Name of Power Utility- NBCC Duration of Performance of Analysis : 17.01.2023 to 24.01.2023

Relative Humidity of laboratory (%): 53.0

S 10				_	_	_	_		Temper	ature of l	laboratory	(°C): 23.0	
11	- 1		Navarana A	No.	Date Raise 100	18:		Almerical to	-	Equilio			AVACE
Sample III	Date of collection	Dani at proporation	Date of sample receiving at laboratory	ASE Quantity (Mo	R.R.No./ F. Nove No.	P.E. Date				Fig. 6	MI 2.40*	GCV	Assipand Grade
Vincente	100000000000000000000000000000000000000	111111111111111111111111111111111111111	Date: 1000000		(Val) - (-)	The same	71.74	Ability	(Northby)	38%	A5876	(NewYork	
AF28//4001	38.11.3822	60.13.2032×	15.12.1012		001803 A		4.7	49.1	3859.59	7.3	39.8	3754	G12
	Sample ID TPS:74561	Sample III collection	Sample III collection proporation	Sample III collection proporation belocatory	Sample ID collection proporation belongster (Mo	Sample ID Date of Oats of Control	Sample ID collection proporation telectron (Mo #, New No. D.E. Date	Sample ID Date of Date of Control Properties Internation (No. 1) Date of Control Properties Internation (No. 1) Date of Control Properties Indicately (No. 1) Da	Date of Open at Date of concepts File File		Date of Date	Bate of Date	Date of Date of Date of Date of Date of Proporation Date of Date of Proporation Da

(i) Sample collected as per FSA.

(ii) Ash, & Moisture as per 15 1350 (Part-1), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is perfurmed by external service provider.

(v) This report should not be replicated or reproduced.

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the arrive num Sey / Dr. Ashak Kr. Singh ugu aques wer, emus prem arese front / HORG, ROA Division & Project Leader और एक आहे. आकर केलीन क्षत्र एवं हैंका अनुसंबंध बंब्यान CSER-Central Institute Of Mining & Fuel Research Govt. Of India, Dhashad

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Date of lesse : 07.63.2023

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Test Report No.- CIMER/DHN/TPS/LD/MAR/22-23/20667 A Name of Cost Company-NORTHERN COALPIELDS LIMITED Loading Area/Siding-JHENGURDA Name of Power Utility NBCC Duration of Performance of Analysis : 28.02.2025 to 06.03.2025

Relative Humiday of laboratory (%4: 53.4 Temperature of laboratory(*C): 23.0

_								0 0	undried by	en Contract	Equipment	d subtane l on a serio	MED 10074	Anakered
		Date of	Serif	Date of marple	HR Quanti	R.R.No.		1	ASIPS	GCV (Kridke)	MN	A580%	GCV (Kolègi	Grade
52, No	Sample III	paleoter vallector	angeration	Taboratory	040	P. Priese Nov.	ILH, Duo-	H-S	40.8	3819.94	1.3	39.1	3661	GU
	TPS/\$1096	19,12,1001	06.81.2823*	12.01.2623		861379		3.3	thr.	3011.54	-	-	-	
50	113000	100	5000	DOMESTICS:		001887		3,5	35.8	4249.76	8.0	34.2	4064	GH
2	TPS31099	28.12.2003	67/81,2923*	12,01,2933		000000		_	-	11.0000	-		4144	-
				12.61.2023		981897		3.3	40.9	3818.72	1,2	39.5	3684	(21)
3	TFS:81114	25.12.2022	11/01/1025+	13.01.2003		111111111111111111111111111111111111111			1	1	-			13-

N.B: *Delay in sample preparation

Note:

(i) Sample collected as per FSA. (ii) Ash.& Moisture in per IS 1350 (Part-I), 1764 Reaffirmed 2019; ASTM D 2582-15.

11111 GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service practiles.

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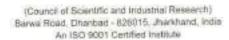
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Date of issue: 13.03.2023



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Test Report No.- CIMFR/DHN/TPS/LD/MAR/22-23/20696 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Utility- NBCC Duration of Performance of Analysis : 02.03.2023 to 11.03.2023

> Relative Humidity of laboratory(%): 53.0 Temperature of laboratory(°C): 23.0

9					Re	Dwar Bake MC	×	- 10	Air-dried by	oft:	Emilitor	og oralpiore RN & APC	benin (68%)	Authorit
83 No.	Asserts 10	Date of collection	See of proparation	Date of sample receiving at laboratory	RR Quantity (Mt)	E.E.Su.l F. Note No.	R.H. Deta	H79	45074	OCV (Koring)	60%	ASH%	GCV (Koslikg)	Grade
1	TPS/82521	26.12.2021	12.01.3023*	15/01/2023		981999		4.5	33.9	4368.80	7.9	32.7	4213	GH
2	TPS/82524	27.11.2022	14.01.2023*	16,61,7023		001100		3.7	35.2	4054.40	7.8	36.6	3911	G12

N.B: *Delay in sample preparation

Notes

(i) Sample collected as per FSA.

(ii) Ash, & Moisture as per 15 1350 (Part-1), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) Name of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

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Date of issue: 13.03.2023

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Test Report No.- CIMFR/DHN/TPS/LD/MAR/22-23/20697 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Utility- NBCC Duration of Performance of Analysis : 02.03.2023 to 11.03.2023

Relative Humidity of laboratory (%): \$3.0 Temperature of laboratory(°C): 23.6

			-		160	hog Rise MG	В		un-shipt to		Equilibrate	H & arro		Analyses
		Bate of	Date of propagation	Date of sample receiving at laboratory	SH Quartity (Mo	R.M.Na.1 F. Nata No.		M %	ASHES	GCV (Kol/kg)	M%	ASSES.	OCV (Kraffa)	Grade
1	TPS/83632	28.12.2632	18.61.2023*	34.01.2023		001994 A		3.9	39.0	3935,14	6.8	37,8	3816	GH
2	TPS/83633	19.11.2022	18.01.2023*	24.01.2023		901906 B		2.4	47.3	3424.66	2.6	44.8	3242	614
3	TPS/83644	30,12,2022	20,01,2023*	24.01.2013		001912 A		14	37.3	3873.76	7.0	37.4	3890	GE
7.1	TPS/83645	30,13,3822	28.01.3034	24,81,2923		00191218		7.3	38,6	3864.35	7,1	38.7	3873	GU
4		0.0000000000000000000000000000000000000	21.01.2023*	24.01.2033		000314A		7.3	43.1	3389.82	6.5	43,6	3426	GE
5	TPS/83648	31.12.3002	21/61/5623	***********		7,655,5	-		44.4	3593.31	7.2	41.4	3593	GE
6	TPS/83649	31.12,2022	21.01.2023*	24,01,2021		90(914 B		7.3	41,4	3593.31	142	41.4	2019	1

N.B: *Delay in sample preparation

Nete:

(i) Sample collected as per FSA.

(ii) Ash,& Moisture in per IS 1350 (Part-I), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GEV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

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Date of issue: 16.04.2023

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Test Report No.- CIMFR/DHN/TPS/LIFAPR/23-24/1556 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Lunding Area/Siding-JHINGURDA Name of Power Utility-NBCC Duration of Performance of Analysis : 21,03,2023 to 15,04,2025

> Relative Humidity of laboratory(%): 53.0 Temperature of laboratory(°C): 23.0

					Rei	heer Rate/MS	ж.		Air-dried ha	abe	Equilibrate	HEALANC	hasis 067%	Amalysed
SI, 76	Sandr ID	Due of colorine	Date of properation	Date of sample receiving at laborators	RR Quantity (MI)	B.B.Na/ F. Nam No.	R.R. Date	M 74	ARRES	GCV	18%	ASHS	GCV (Kodikg)	Grade
1	TPS/96722	13,01,2023	#2.02.1013*	03.62.2623	i contra	601087 III	crossus	3.0	42.0	3918,85	6.1	40,7	3794	G11
2	TP5/86728	13,81,2823	10,00,3023*	83,02,2025		001960 B		4.7	39.0	3894.89	6.6	38.2	3817	GII

N.B: "Deby in sample preparation

(i) Sample collected as per FSA.

(ii) Ash, & Moisture as per IS 1350 (Part-1), 1984 Reafficated 2019; ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider,

(v) This report should not be replicated or reproduced.

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Date of issue : 05.04.2023

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Test Report No.- CIMFR/DHN/TPS/LD/APR/23-24/1106 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Utility-NBCC Duration of Performance of Analysis: 27.03,2023 to 04.04.2023

> Relative Hamidity of laboratory(%): 53.0 cuture of laboratory C > 23.6

	1				No.	lway Rakat MC			Air-dried by	nép.		RR & APC		Analyse
51.70	Songta III	Date of solution	Date of proparation	Date of sample receiving at laboratory	BR Quantity (Mo	R.R.No./ F. Note No.		MS	ASHIS	GCV (Kostbar	Mh	ASIRS	GCV (Kotke)	Grade
1	TPS/87841	15.41,3003	05.42,2823*	01.02,2623		000567 A		3.7	29.8	4661.94	8.9	28.2	4410	G16
2	TPS/87842	15.01,3023	05.02.2023*	06.01.2023		001967 B		2.8	37.8	4300.54	6.3	36.4	4146	GH
3	TPS/87849	16.61,2023	05.02.2023*	09/02/2023	1 1	001971 A		6.3	31.9	4353.27	7.8	31.4	4284	GH
4	TPS/87850	16.01.2023	05.02.1023*	09.02.2023		901971 B		4.2	40.5	3941.13	5.8	39.8	3875	G12
5	TPS/87857	17.01.2023	06.02.2025*	09.02.2023		001975 A		5.0	31.3	4472.91	7,3	30.5	4369	GIN
6	TPS/07858	17.01,2623	96.02.3003*	09.02.2023		000975 B		2.3	46.5	3566.16	5,3	45,1	3457	Gij
7	TPS/07862	18.01.2023	66.02.2023*	09.03.2623		001978.A		5.5	31.2	4457.94	7.6	30.5	4359	G10
8	TPS/81863	18,01,2023	66,92,2023*	09.03,2033		00197N II		3.8	40.6	3848.04	6.1	39.6	3756	G11
9	TPS/87868	19,91,2023	07.02.2023*	99.02.2023		601981 A	95	4.6	35.2	4200.58	8.3	33.8	4000	GH
10	TPS/87869	19.61,2023	07.02.2023*	69.02.2023		901981 B		3.7	. 39,6	4013.05	2.1	38.2	3871	G12
11	TPS/87880	21.01,2923	98.02.2023*	19,02,2023	8	001987 A		4.7	34,7	4206.64	7.2	33.5	4096	GH

N.B: *Delay in sample preparation

Nates

(i) Sample collected as per FSA.

(ii) Ash.& Moisture as per 15 1350 (Part-1), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

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Date of issue : 16.04.2023

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Test Report No.- CIMFR/DHN/TPS/LIVAPR/23-24/1567 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Utility-NBCC Duration of Performance of Analysis : 27.03,2023 to 15.04.2023

> Relative Humidity of laboratory(%): \$3.0 perature of laboratory Ck 23.0

					Bel	Iwas Robel MG	n		No dried he	ddg	Equilibrate	RSLE OFC	teata (90%)	Analysed
41.50	Sample 10	Data of collection	Then of proporation	Date of sample receiving at laboratory	THE Quartery (MI)	E Note No.	R.R. Date	68.76	AMEN	(Kothe)	Mis	ANIPS	OCY (Kotho)	Grads
1	TPS/87881	21.01.2023	88,82,3923*	09.02.1023		001987 H		3.5	10.3	3969.21	5.9	39,3	3870	G12

N.B: *Delay in sample preparation

Note:

(i) Sample collected as per FSA.

(6) Asta, & Moisture as per IS 1350 (Part-1), 1984 Reaffirmed 2019/ASTM D 7882-19.

(iii) GCV as per ASTM D 5865-19

(ix) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

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Date of issue : 11,84,2023

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Test Report No.- CIMFR/DHN/TPS/LD/APR/23-24/1316-A Name of Coal Company NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Utility- NBCC Duration of Performance of Analysis: 30.03.2023 to 10.04.2023

Relative Humidity of laboratory(%): 53.0 Temperature of laboratory(*C): 23.8

_					15	lwgo Hokel MiG	. 1		or-detect has		Equilitres	HA HELD	bank (80%)	Analysed
		Date of	David	Date of careple receiving M	RR Quartity	R.R.Ne.J	1	M %	ASHTS	GCV (Keek)as	M06	ASHIS.	dev dostké	Grede
d. No	Sample 10	estimation	properation	laboratory	(Mtr)		R.B. Dor	4.2	38.9	1903.35	5.5	38.4	3850	G12
1	TPS/89172	22.01.2023	(99.02.2023*	15.62.2623		OHIPPE A		412	34.5	Secretary .		-		612
-		22,01,2603	09.03.3023*	15.02.2013		001991 8	0	4.1	38.5	3986.83	6.0	37.7	3908	4112
2	TPS/99173	22,01,2007		1/25/2003		001995 A		5.7	31.4	4474.93	6.7	31.1	4427	G10
3	TPS/89179	23,61,2623	10.02,2023*	15,02,2023		001555.55	-		1000			33.5	4118	GH
4	TPS/89180	23,01,2023	10.02.2023*	15.02.2023		001995 B		4,1	35.3	4297,09	8.1	35.0	****	-
4	113/87186	2010000000	Ton Internation			901999		3.9	40.3	3864.80	2.6	38.7	3716	612
5	TFS/89186	14,01,1033	10,02,2023*	15.82.2923	_	941	-	-	-		7.6	345	4020	GII
6	TPS/89191	25,01,2603	11.02.2013*	15.82.1023		001003		4.0	35.8	4176.85	2/4	100	2557	-
200				15.01.2023		0000000		8.9	20.8	5095.50	8.9	18.8	5056	G8
2	TPS/89199	17/86,3923	11.02.1023*	Contract	-	1000	-	4.1	39.0	3904.05	7.4	37,7	3772	GE
8	TPS/89206	28.01.1033	12,02,2023	15.03,2023		942913		4.1	35,0	200000	-	-	1	GE
7.0	20.000	29.01.2023	13.01.2032	15,02,1023		602016	N	5.9	37.6	3918.8	1.7.9	36.8	3845	- Gr
9	TPS/89210	29,01,2029	Landition	Contraction of the	+	notata		3.3	43.5	3668.1	3 6.9	43.6	3532	GI
10	TPS/89211	19,91,2923	13.02.2023	15.02.2013		ontons	-	-	-	1		140	3735	GI
11	TPS/89215	31,01,1003	14.02.2023	15.60,363		992933		4.0	41.3	3847.2	5 6.8	46.	370	100

N.B: *Delay in sample preparation

Note:

(i) Sample callected as per FSA. (ii) Ash,& Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019/ ASTM D 7582-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment to performed by external service provider.

(v) This report should not be replicated or reproduced.

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the annie year lite / Dr. Ashak Kr. Singh er arguest trept, mouse parent assures finere / HORG, RQA Division & Project Leader क्षेत्र प्रकार आहेत आराज्य केटरीय स्वयंत्र एवं होत्या अनुस्थात सामान CSIR-Central Institute Of Mining & Fael Research Govt. Of India, Dhashed

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And of Report.

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वेद्यानिक तथा और्वानिक अनुगयान वीत्यह बरवा रोड, दलबाद - 826 015, झारखण्य, ध्यारत एक अर्थ ५म जो १००१ प्रमाणित संस्थान



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Date of issue : 30,04,2023

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/LD/APR/23-24/5094 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Leading Arm/Siding-JHENGURDA Name of Power Unity-NBCC Duration of Performance of Analysis: 12.04.2025 to 29,84.2023

Relative Humidity of laboratory(%): \$5.0 Temperature of laboratory(°C): 13.5

				_				is stoned by		Equitariti	MA 49°C	Sanda (047%)	Aculysed
				- 1	Railway Rober Miles	K .		To-shan or				112000	Grade
	Allegava	The second secon	Date of sample	RR	B.S.5s./		ww.	45004	(CCV (Knoby)	MAL	ASH%	(Kedage	-
Same (0	Date of subsection	properation	laboratory	010		H.H. Date		1	1920.42	5.5	35.5	3823	G12
No real and other	15.02.2015	26.02.2003*	82,83,2023		002985 A		3,1	-	-	-		200	GIS
Theratara	The second				002889 A		4.2	42.9	3596,40	5,6	42.3	3541	-
TPS/92421	16.02.2023	38.03.3033+	02.03.2023			-	1.0	0.1	3815.64	52	41.4	3731	613
	24 65 7823	TR. 07. 1013*	92 60.2923		002099 H		3.2	40,5	380.00			-	GI
TPS/92433	16.00	-	-		002004 A		3,7	32.9	4497.66	8.8	31.2	4259	L
TPS/92430	(1,02,1023	01.03.2013*	02,83,2823	8		-	Time	1000	2000.00	29	35.6	4117	GI
333455	1000	81.85.3935	62,93,302	3	002994 H		2.0	37.5	43497/6	1.000	100,000		
	TPS/92433 TPS/92439	Sample ID Date of Authorisis TPS/92414 15/02/2013 TPS/92421 16/02/2013 TPS/92422 16/02/2013 TPS/92430 (1/02/2013)	Date of Date of Preparation	Date of Date	Date of Lamento Date of Lamento RK Quantity Chin	Date of Life Color Date of	Date of Date	Date of Date of Date of Date of sample Country Edit State Country Edit State Country Edit Country Edit Ed	Date of Date of Date of Date of sample Country Edit State	Date of control of teller from Date of control of teller from the contr	Date of Local Control	Date of Date of Date of Date of Date of sample Control of Control of	Date of countries Date

N.B:*Delay in sample preparation

- (iii) Ash & Moisture as per 18 1350 (Part-I), 1984 Reafffransi 2019/ ASTM D 1582-15.
- (iii) GCV as per ASTM D 5865-19 (iv) None of the experiment is performed by external service provider.
- (v) This report should not be replicated or reproduced.

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सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान 276.Central Institute of Mining and Fuel Research

विज्ञानिक तथा और्योगिक अनुसंधान परिषद) बरवा शेंड, प्रसवाद - 826 015, शास्त्रपष्ट, पारत एक जर्ड एम जो १०३१ प्रमाणित संस्थान

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Date of issue 1 28,04,2023

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/LD/APR/23-14/5044 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Utility-NBCC Duration of Performance of Analysis: 24,04,2925 to 27,04,2023

Relative Humidity of laboratory(%): 55.0 Temperature of laboratory (°C): 23.5

						Railway Robel MG	4/4		Air-dried to		Ludbri	RH & APC	basis (80%) 5	Andrei
istin	0 323	Date of	Due of proportation	Date of sample requiring at laboratory	ESR Quantity (Miss	E. Nate No.	E.B. Sair	MN	ASHS	GCV (Koděg)	M%	AMEN	GCY (Knilkg)	Grade
52. No.	Sample 107 TPS/95692	01.03.3023	13.83.2023*	17,03,2023		002145		4,6	42.1	3732.47	7.8	41,8	3639	613
-	TPS/95705	0485.2023	14.60.3625*	17,60,2023		002153		7.1	35.2	4071,49	7,6	35.0	4250	GH
1	1,49,544	1000000	15.63.3023*	17.03.3023		902158 A		3.4	45.3	3492.06	5.7	462	3409	GU
X	TPS/8713	at/03.2623	DOMESTICS.	17.00.000		248530000				3347.17	42	65.6	3257	Gi
4	TPS/95714	65.63.2023	15.03.3923*	17.65.2023		002158 B		3.3	46,9	3347,17	5.9	85.6	3357	-6

N.B.*Detay in sample preparation

Note:

(i) Sample collected as per FSA.

(ii) Ash & Moisture as per IS 1350 (Part-I), 1984 Reaffirmed 2019/ ASTM D 7882-15.

(iii) GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

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Date of issue : 03.05,2023

LOADING END ANALYSIS REPORT

Test Report No.- CIMER/DHN/TPS/LD/MAY/23-24/5236 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Leading Arm/Siding-JHINGURDA Name of Power Utility- NBCC Duration of Performance of Analysis : 28.04.2023 to 02.05.2023

Relative Hamistry of laboratory(%): 53.0 Temperature of baboraters (*C): 23.6

-	- 1	- 1			1	New Rales MC		1	individe hop		Ludkere I	tic & erc)	mos. 669%	National
		Date of	Date of	Date of sample receiving at	NR Quarrier (NR)	B.B.Ne./	a ft. Swe	M. %	A9805	CCY	MN	ASHM	GCV (Kolfke)	Greate
.No	Sample 135	reflection	Paralle and Parall	23,89,3923	1501	102162 A		15	37.8	4119.54	61	36.8	4000	G12
1	TPS/97617	06.03.2023	18.43.2023*	23.83.1964		A STATE OF		2.7	46.6	3498.70	5.3	45.4	3405	Gill
2	TPS/97618	06.63.2023	(8.03.2023*	23.05.2023		MINITE.		4.0	100			1000	3513	G18
3	TP5/97623	17.19.2023	19.05.3/23*	23,83,2023		BIGIERA		2.9	43.3	3/30.89	3.4	12.0	3513	Gio
-	The Section of	7222		23/03/3/03		gottes B		3.4	41.3	3104.71	6,6	46.5	3557	GU
*	TPS/97624	67.63.2023	19.63.3021*	22/8/10/50		77050		-	43.0	3771.15	6.1	41.3	3666	GE
5	TPS/97631	09.03,2023	19/03/2023*	21.03.2003		662872		3.4	180		11000	011000	10.00	GI
6	19892633	10.43.2023	20.03.2035*	25.08.2023		002074.9		4.5	40.9	1901,35	5,9	40.3	1843	501.
	1646 Sty	2500000	-			00205410		12	12,1	3823.04	(3	40.8	3701	G1
7	TPS/9/634	10.03.2023	20.03.2023*	35.03.202)	-	32000	-	1		3557.8	5.9	43.9	3543	63
8	TPS/97644	13.16.2023	21.05.3023	23.43,7025		002181		5.5	48.1	3251.6	12	1	-	-
9	TPS/97451	13.03.2023	22.63.2923	23.83.302		002188		6.3	43.3	34400	6 53	40.5	3467	61

N.B: "Delay in sample preparation

None

(ii) Ash,& Mossure as per IS 1350 (Part-I), 1984 Reaffiresed 2019; ASTM D 7502-15.

(iii) GCV as per ASTM D 5865-15

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced.

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tive of Report.

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Date of issue : 10.05.2023



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Test Report No. - CIMFR/DHN/TPS/LD/MAY/23-24/5540 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JHINGURDA Name of Power Utility-NBCC Duration of Performance of Analysis: 05.05.2023 to 09.05.2023

> Relative Humidity of Inhoratory (%): 53.0 Temperature of life metery(*C): 23.0

	Sample IID	Done of codestion		Rainer Hakel NIGH Air dried hasis		ele.	Epilhren	hasis mitts	Anstone					
St. No.			Dur of proparaties	Date of sample receiving at laboratory	RR Quantity (M)	E. Note No.	R.R. Date	M %	ASIDA	GCV (Kinthe)	3175	4505	GCV (Krallig)	Analysed Grade G11
1	TPS/99367	17,63,2623	25.03.2023*	29.63.2023		002199		4.2	39.9	3966.06	5.1	39.5	3929	GIZ
2	TPS/99374	18.00.2023	36.63.3823*	29.93.3923		002205		6.0	38.1	4071,46	7.6	37.5	4002	GII

N.B; *Delay in sample preparation

Notes

(i) Sample culticated as per FSA.

(ii) Ash, & Moisture as per 15 1350 (Part-I), 1984 Reaffirmed 2019; AST M B 1582-15.

660 GCV as per ASTM D 5865-19

(iv) None of the experiment is performed by external service provider.

(v) This report should not be replicated or reproduced,

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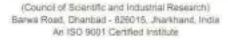
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Date of issue : 12.04.2023

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/LD/APR/23-24/1398 A Name of Coal Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-BINA, BINA SILO Name of Power Utility- NBCC Duration of Performance of Analysis: 05.04.2023 to 11.04.2023

Relative Humidity of laboratory(%): 55.0 Temperature of laboratory(*C): 23.5

50. No	Sample 1D	Description	Date of properation		Hallway Ruto' MCR			Air-dried busis			Equilibrated occurrent basis (68%) 601.6.489°Cs			Assistance
				These of sample receiving at laboratory	RE Quantity (Mri	E.R.No.J E. Nate No.	R.H. Date	Mile	ASSIN	GCV (Knilkg)	M%	ASHN	GCV (Kol/kg)	Grade
1	TPS/90458	16.01.2023	11.00.2003	21.02.2023		003192	-	6.3	34.7	4303.05	7,0	34,4	4271	GII

Note:

(i) Sample collected as per FSA.

- (ii) Ash & Moistage as per 15 (350 (Part-1), 1984 Reaffirmed 2019/ ASTM D 7982-15.
- (iii) GCV as per ASTM D 5865-19
- (iv) None of the experiment in performed by external service provider.
- (v) This report abusin not be replicated or reproduced.

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डॉ॰ जनोक कुमार सिंह / Dr. Ashok Kr. Singh प्रमुख अनुवाराज वागृह, जंबायज गुणवार आकारत विधान / HONG, NGA Cryston & Project Lauder ती॰ एक॰ आई॰ आर॰- केन्द्रीय सनन एवं ईंघन अनुसंधान संस्थान CSIR-Central Institute Of Mining & Fael Research Govt. Of India, Obserbad P.O. F.S.I., PIN-828108, Jherkhaud

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(वैद्यानिक तथा अंद्योगिक अनुसंधान परिषद) बरवा रोट, धनवार - 826 वर्गा, झारकाब, भारत एक अर्थ एम ओ १००१ प्रमाणित संस्थान

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Date of issue : 28.03.2023

LOADING END ANALYSIS REPORT

Test Report No.- CIMFR/DHN/TPS/LD/MAR/22-23/22275 A Name of Cast Company-NORTHERN COALFIELDS LIMITED Loading Area/Siding-JAYANT, JAYANT SILO Name of Power Utility-NBCC Duration of Performance of Apolysis: 16.63.2023 to 27.03.2023

Relative Humidity of Inforatory (%): 83.0

51. No.	Sample ID	Date of collection			Robert Kde MCR			Air-draft basis			Equilibrated mentury frate (1974- 835 & 40°C)			
			Date of proposition		g at Question	B No.	R.R. Illeit	M's	ASH%	GCV OkosiNgr	Mile	ASHS	GCV (Kol/kg)	Analysed firede
1	TPS/84276	23/01.2023	27.01.2023	28.01.2023		3000061		5.0	37.6	4291.53	11/2/11	36.8	173	GH

Sate:

(i) Sample collected as per #SA.

- (ii) Ash,& Moisture as per 15 1350 (Part-1), 1984 Reaffirmed 2019/ ASTM D 7582-15.
- (iii) GCV as per ASTM D 5865-19
- (iv) None of the experiment is performed by external service provider.
- (v) This report should not be replicated or reproduced.

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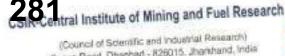
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सीएसआईआर-केन्द्रीय खनन एवं अनुसंघान संस्थान

(वेळनिक तथा जोवींगिक अनुमंचन परिका) बरवा रोड, धनसार - 826 015, बारखाय, धारत एक आई एन औं १००१ प्रमाणित मंग्यान



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Date of issue : 13.04.2023

LOADING END ANALYSIS REPORT

Test Report No. CIMFR/DHN/TPS/LD/APR/23-24/1444 A Name of Cord Company-NORTHERN COALFIELDS CIMITED Loading Army Siding, JAYANT, JAYANT SILO Name of Power Utility-NBCC Duration of Performance of Analysis; 68,04,2625

Relative Humidity of inheratory (%): 53.0 Temperature of laboratory(*C): 23.0

ACTIVATION OF THE PROPERTY OF							-	-	is desired from		Equilibrated mentary term (MPS) RH & 40°C)			Androel
T					Red	R.R.No.)	1		go-grass to	GCV			GCV	Grade
		parel	Date of	Date of comple speciality at: Subpretory	RR Quarter (NR)	F, Non-No.	R. R. Date	Mits	35.0	(Kreikg) 4342.86	6.4	34.9	4324	G10
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- Ash, 6 Meisture as per IS 1350 (Part-I), 1984 Reaffirmed 2015/ ASEM D 7582-15.
- (iii) GCV as per ASTM D 5865-19 (iv) Note of the experiment is performed by external service provider.
- (v) This report should not be replicated or reproduced.

(Signature and Designation of Authorized Signatury)

the active sport Ste / Dr. Ashrik Kr. Singh way septem seg, essent gester armen faster / HORG, RQA Division & Project Lauder तीत हो। आहे आतः केलीय सदय एवं होता अनुसदान सामाव CSER-Centrel Institute Of Mining & Fuel Research Gevt. Of India, Dhanhad P.O. F.R.L. PIN-828105, Burichand

HQ: Dhanbad - 2 +91-326-2296023, 2296006 (O) : +91-326-2296025 EPBAX: +91-326-2296012/6013/6027/6028

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PHOTOGRAPHS TAKEN DURING INSPECTION OF THE JOINT COMMITTEE CONSTTUTED IN THE MATTER OF THE HON'BLE NGT OA NO. 976/2024/PB TITLED VIJAY KUMAR SINGH Vs STATE OF BIHAR & OTHERS.

Photographs of M/s NTPC-NSTPS, Nabinagar, Aurangabad.



RCC approach road to the Ash Dyke



Joint Committee visiting Ash Dyke.



Unpaved part between RCC road and Ash Dyke.



Ash Dyke showing dry dust on the Unpaved part

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Water Sprinkling over Wagon (Pre-tippling)





Wagon Tippler section



Stack Monitoring



Debris over the platform of Stack

Photographs of M/s BRBCL, Nabinagar, Aurangabad.



Ash Dyke of M/s BRBCL.



Ash Dyke of M/s BRBCL.



Unpaved road around Ash Dyke.



Stack Monitoring.



FGD work under progress.



Effluent Treatment Plant.

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Item No.01 Court No. 2

BEFORE THE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH, NEW DELHI

Original Application No.976/2024

Vijay Kumar Singh ...Applicant

Versus

State of Bihar ...Respondent

Date of hearing: 03.10.2024

CORAM: HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER

HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER

Applicant(s): None

ORDER

1. On a letter petition dated 17.12.2023 sent by Vijay Kumar Singh @

W Singh resident of Kshatriya Nagar, G.T. Road, Aurangabad, State of

Bihar, this Original Application has been registered under Sections 14

and 15 of National Green Tribunal Act, 2010 (hereinafter referred to as

'NGT Act, 2010') exercising suo-moto jurisdiction in view of law laid

down by Supreme Court in Municipal Corporation of Greater Mumbai

Versus Ankita Sinha and Others, (2022) 13 SCC 401.

2. Complainant has said that there are two Thermal Power Plants of

National Thermal Power Corporation namely BRBCL and NPGC

functioning at Nabinagar, District Aurangabad, wherein fuel used for

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generation of electricity comprised a waste material, black filter dust and

rejected coal which is causing air pollution effecting local people and

creating health hazards.

3. In our view, facts stated in Original Application required

verification before taking any further action in the matter and therefore,

we constitute a Joint Committee comprising Central Pollution Control

Board (hereinafter referred to as 'CPCB'); Bihar State Pollution Control

Board; (hereinafter referred to as 'BPCB') Integrated Regional Office

Ministry of Environment Forest and Climate Change, Aurangabad; and

District Magistrate, Aurangabad.

4. CPCB shall be the Nodal Authority for co-ordination and

compliance.

5. Said Committee shall collect relevant information after visiting the

site, and submit a factual report within one month. Committee shall also

verify as to whether consent conditions and EC conditions have been

complied with by the above proponents.

6. List for further consideration on 04.11.2024.

Sudhir Agarwal, JM

Dr. Afroz Ahmad, EM

October 03, 2024

Original Application No.976/2024

M

Item No. 16 Court No. 2

> BEFORE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH, NEW DELHI

Original Application No. 976/2024

Vijay Kumar Singh Urf Dablu Singh Bhiar Vihar Sabha

Applicant

Versus

State of Bihar

Respondent(s)

Date of hearing: 04.11.2024

HON'BLE MR. JUSTICE SUDHIR AGARWAL JUDICIAL MEMBER CORAM:

HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER

Applicant:

None

Respondents: Mr. Srinivas Vishven, Advocate for CPCB (through VC)

ORDER

1. This original application was registered on a letter petition dated

17.12.2023 sent by Vijay Kumar Singh, alias Dablu Singh, resident of

Kshatriya Nagar, G.T. Road, Aurangabad, State of Bihar.

2. Complainant has said that there are two Thermal Power Plants of

National Thermal Power Corporation namely BRBCL and NPGC

functioning at Nabinagar, District Aurangabad, wherein fuel used for

generation of electricity comprised a waste material, black filter dust and

rejected coal which is causing air pollution effecting local people and

creating health hazards.

3. Tribunal after being *prima facie* satisfied that a substantial question

relating to environment has arisen entertained the matter but found it

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appropriate to obtain a factual report and thus constitute a Joint

Committee comprising Central Pollution Control Board (hereinafter

referred to as 'CPCB'), Bihar State Pollution Control Board (hereinafter

referred to as 'BSPCB'), Integrated Regional Office, Ministry of

Environment, Forest and Climate Change Aurangabad and District

Magistrate, Aurangabad.

4. CPCB was made nodal authority for coordination and compliance

and committee was required to submit report within one month.

5. Neither any report has been submitted nor any reason has been

communicated to Tribunal.

6. Sh. Srinivas Vishven, Advocate appearing for CPCB stated that

inspection has been completed, information has been collected and report

is under preparation. He seeks three weeks' further time to file report.

7. Let the report be filed within three weeks failing which all the

members of Joint Committee shall appear virtually before Tribunal on the

next date.

8. List on 29.11.2024.

Sudhir Agarwal, JM

Dr. Afroz Ahmad, EM

November 04, 2024 Original Application No. 976/2024 AB

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