

(A Subsidiary of NTPC Limited)

केरेडारी कोयला खनन परियोजना **Kerandari Coal Mining Project** 

Ref No.: 1078/KDCMP/EMG/2024/07

Date: 25.09.2024

To.

THE MEMBER SECRETARY,

JSPCB (Jharkhand State Pollution Control Board),

H.E.C., Dhurwa,

Ranchi - 834 004 (Jharkhand) Email: ranchijspcb@gmail.com.

Subject: Submission of Environmental Statement in Form-V for the financial year ending on 31st March 2024 for "Kerandari Coal Mining Project, NTPC Mining Limited, Hazaribagh, Jharkhand"- Reg.

Ref: CTO granted to KDCMP vide Ref No. JSPCB/HO/RNC/CTO-18525714/2024/1083, dtd 28.06.2024.

Dear Sir.

In compliance with the Rule 14 of the Environmental (Protection) Rule 1986, Please find herewith enclosed the Environmental Statement in Form-V for the financial year ending on 31st March 2024 for "Kerandari Coal Mining Project, NTPC Mining limited, Hazaribagh, Jharkhand".

This is for kind information please.

Thanking you,

Yours Faithfully

Ramesh Kumar D. DGM (P&S/ Mining) Kerandari Coal Mining Project NTPC Mining Limited

Copy To,

1. Regional Director, Kolkata, Central Pollution Control Board; Southern Conclave, Block 502, & 6th Floors, Kolkata-700107 (W.B.), Raidhanga Main Road, mkbiswas.cpcb@nic.in

2. The Deputy Director General of Forest (C), Ministry of Environment, Forest and Climate Change, Regional Office (ECZ), 2nd Floor, HQ. Jharkhand State Housing Board, Harmu Chowk, Ranchi (Jharkhand)-834002, email-ro.ranchi-mef@gov.in-

3. Regional Officer, Jharkhand State Pollution Control Board, PTC Chowk, Hazaribagh, Jharkhand, Email: jspcb hazaribagh@rediffmail.com

पंजीकृत कार्यालय : एनटीपीसी भवन, स्कोप कॉम्प्लेक्स, 7, इंस्टिट्यूशनल एरिया, लोधी रोड, नई दिल्ली — 110003. टेलीफोन नं./Tel: 011-24387333, फैक्स नं./Fax: 01124361018 Registered Office: NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodi Road, New Delhi - 110003. E-mail: ntpccc@ntpc.co.in, Website: www.ntpc.co.in



# FOR NTPC Mining Ltd KERANDARI COAL MINING PROJECT

(FOR THE FINANCIAL YEAR ENDING 31ST MARCH 2024)

(Under Rule 14 of The Environmental (Protection) Rule – 1986)





Environment Management Group

NTPC Mining Ltd.-Kerandari Coal Mining Project

PO: Barkagaon, Dist: Hazaribagh

Jharkhand - 825 311

## [FORM-V]

(See Rule 14 of The Environmental (Protection) Rule – 1986)

# Environmental Statement for "NTPC Mining Ltd - Kerandari Coal Mining Project" [For financial year ending on 31st March 2024.]

## PART-A

| S. No. | DISCRIPTION  |  |
|--------|--|--|
| 01     | Name and address of the own-                                   | Shri SHIV PRASAD                                   |
|        | er/occupier of the industry Opera-                             | General Manager,                                   |
|        | tion or process  | M/s NTPC Mining LtdKerandari Coal Min-             |
|        |  | ing Project.                                       |
|        |  | Site Office: Sikri                                 |
|        |  | Post : Barkagaon                                   |
|        |  | Dist : Hazaribagh (Jharkhand)                      |
|        |  | <b>PIN</b> : 825 311.                              |
| 02     | Industry category primary :- (SIC Code) Secondary – (SIC Code) | Open cast Coal Mining Project                      |
| 03     | Production capacity – Units                                    | 6 MTPA (Coal)                                      |
| 04     | Year of establishment  | Mines Operation started in the month of April      |
|        |  | 2023   |
| 05     | Date of the last environmental                                 | Environmental Statement submitted vide letter ref. |
|        | statement submitted  | No. NTPC/KDCMP/Mining/2023/214 dated               |
|        |  | 11.09.2023 (Mine operation started on 05.04.2023)  |

#### PART-B

## Water and Raw material Consumption

## i) Water Consumption:

|   | Water and Raw material Consumption       |   |                |
|---|--|---|----------------|
| 1 | Water Consumption m³/day                 | : | 118.38 m³/day  |
| 2 | Process                                  | : | Not applicable |
| 3 | Cooling (Water sprinkling on Haul roads) | : | 96.72 m3/day   |
| 4 | Domestic (Drinking purpose)              | : | 21.66 m³/day   |

| Process water consumption per product output (Litres / te) |   |  |  |
|--|---|--|--|
| Name of Products   |   | During the previous fin.<br>Year (2022-23) | During the current fin. Year (2023-24) |
| Coal   | : | Not a <sub>1</sub>                         | pplicable                              |

<sup>1.</sup> Substituted by rule 2 (b) of the environment (Protection) amendment rules, 1993 notified vide G.S.R vide G.S.R 3'6 (E) dated 22.04.1993.

## (ii) Raw material consumption -

| S1. | Name of            | Name               |        | Consumption of raw material per u    | ınit of output                 |
|-----|--------------------|--------------------|--------|--------------------------------------|--------------------------------|
| No. | Raw Materi-<br>als | of<br>Prod-<br>uct | UoM    | During Previous<br>FY (2022-23)      | During current<br>FY (2023-24) |
| i.  | Explosive          | Coal               | Kg/te  | Mine operation started on 05.04.2023 | 0.129                          |
| ji. | HSD                | Coal               | ltr/te | Mine operation started on 05.04.2023 | 1.63                           |

Ramesh Kumar D. DGM (P&S/ Mining) Kerandari Coal Mining Project NTPC Mining Limited \*Industry may use codes if disclosing details or raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

## **PART-C**

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

A) Water: No effluent discharged during the reporting period (FY 2023-24).

|                  | (Parameter as specif                                 | ied in the consent issued)                                     |                       |
|------------------|--|--|-----------------------|
| Pollutants       | Quantity of Pollutants Dis-<br>charged<br>(Mass/day) | Conc. of Pollutants Dis-<br>charged<br>(Mass/Volume)           | CPCB STANDARD         |
| Water (ETP       | Discharge) 100% treated effl                         | uent is being reused (attach                                   | ned as annexure-I)    |
| рН               | 100% treated effluent is                             | 7.93   | 6.5-8.5               |
| TSS              | being reused for vehicle                             | 56   | 100.0 mg/l            |
| Oil & Grease     | washing  | 7.6  | 10.0                  |
| The integrated t | ownship for NTPC is under co                         | <b>T.P Discharge)</b> onstruction and STP for NTPO  struction. | C township also under |
| рН               | NA   | NA   | 6.5-8.5               |
| T.S.S            | NA   | NA   | 100.0 mg/l            |
| B.O.D            | NA   | NA   | 10.0                  |

## B) <u>Air:</u>

| Pollutants | Quantity of Pollutants<br>Discharged<br>(mass / Day)                                | Concentrations of pollu-<br>tants in discharges<br>(mass/Volume)   | Percentage of Variation from prescribed Standards with Reasons                  |
|------------|---|--|---|
| (a) Air    | emission sources are exter<br>loading and unloading ope<br>Fugitive Dust Monitoring | pollutant generated in mines and sive and fugitive in nature likeration, coal crushing, screening Report is enclosed as <b>Annexu</b> red at eight locations as per dinnexure-III. | te plying of vehicles, coal g and handling operation.  ure-II And also, Ambient |

## $\underline{PART} - \underline{D}$

## **Hazardous Wastes**

(As specified under Hazardous Waste/ Management and Handling Rules, 1986)

|                        | Total Q                              | Quantity                    |
|------------------------|--------------------------------------|-----------------------------|
| Hazardous Wastes       | During Previous FY (2022-23)         | During Current FY (2023-24) |
| a) From process:       |                                      |                             |
| Used Oil               | Mine operation started on 05.04.2023 | 6.93KL                      |
| Oil contaminated waste | Mine operation started on            | 90.5 Kg                     |

DGM (P&S/ Mining)
Kerandari Coal Mining Project
NTPC Mining Limited

|                                       | 05.04.2023 |     |
|---------------------------------------|------------|-----|
| b) From Pollution control facilities: | Nil        | Nil |

## PART-E Solid Waste

| Sl  |  | Total c   | <b>Juantity</b>                                |
|-----|--|---|--|
| No. | Solid Wastes                                     | During the Previous<br>Financial year (2022-23) | During the Current<br>Financial year (2023-24) |
| (a) | From process (Overburden and Interrelated Waste) | Mine operation started on 05.04.2023            | 2461877.79CuM                                  |
| (b) | From Pollution control facility                  |   |  |
| (c) | Quantity recycled or re-utilized within the unit |   |  |
| (d) | Sold   |   |  |
| (e) | Disposed   | Mine operation started on 05.04.2023            | Kept within ML area<br>2461877.79CuM           |

#### **PART-F**

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

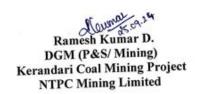
- The generated used oil is stored at an earmarked area in leak proof containers and the same is disposed to authorized recycler in a manner specified by the CPCB.
- The used lead acid batteries are kept at an earmarked area on impervious ground and in manner specified by the CPCB. Same are disposed to an authorized recycler through buy-back system.
- ♣ The generated of OB & Intercalated waste is dumped in earmarked area as per approved mining plan & scheme with mitigate measures such as proper sloping, terracing and garland drainage.
- Top soil is kept at separate location with proper slope and soil erosion protection measures such as planting of soil binding grass species, sowing of seeds, planting trees etc. the top soil shall be reused for bio-reclamation of the Overburden dumps after completion of the OB dumps.

#### PART-G

Impact of the pollution abatement measures taken on conservation of natural re-sources and on the cost of the production

- Except in rainy season, 100% seepage water and mine effluents are being recycled and reused after necessary treatment. For ground water recharge, roof top Rain Water Harvesting Structures has been proposed at site Office.
- Till date no effluent is being discharge, dedicated ETP is installed at the workshop.
- The top soil is stored in a proper manner and the same has been utilized for plantation.
- Garland drainage is provided to mines dump and soil erosion areas.

## PART-H



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

- ♣ 6 nos. of different capacity (two no. of 12 KL, four nos. of 22 KL) mobile water tanker has engaged for mines haul road dust suppression.
- 2 nos. of piezometer ares installed at Fagu saw school and Pagar substation for monitoring of ground water level.
- 4 2 nos. of flowmeter are installed at BGR workshop and Pandu office to measure dewatering from the borewell.
- Crusher with water sprinkling system has been installed.
- Dust extraction and wetting process are being used for drilling process
- ♣ 20KLD ETP plant is installed at mines workshop area and the treated water is reuse for vehicle washing.
- The emissions of the vehicles are being regularly monitored to ascertain the emissions within the norms or not.
- Continuous Ambient Air Quality Monitoring System (CAAQMS) has been installed at the Core Zone.
- Various pollution abatement measures taken are enclosed as Annexure-IV.

## PART-I

Any other particulars for improving the quality of the environment.

|            | KERANDARI COAL MINING PROJECT OF NML                     |                 |
|------------|--|-----------------|
|            | Environmental Expenditure for the FY (April-2023 to Marc | h-2024)         |
| SI. No.    | Purpose of Expense                                       | Amount (in Rs.) |
| (A) For d  | ump slope stabilization                                  |                 |
| 1          | Garland Drain, Settling Pit and its Maintenance          | 2689480         |
| 2          | Dozer Operator Salary, HSD Cost and Maintenance charge   | 2689460         |
| (B) For du | ust suppression  |                 |
| 1          | Water tanker and its maintenance                         | 28522320        |
| (C) Envir  | onmental Monitoring                                      |                 |
| 1          | Annual Maintenance Contract of Instruments               | 8158839.95      |
| 2          | Environmental Monitoring (AAQ, Water, Noise etc.)        | 0130037.73      |
| (D) Plant  | ation  | 801500          |
| (E) Enviro | nment Staff Salary                                       | 1356636.923     |
| (F) Water  | treatment & ETP Maintenance                              | 1097400         |
| (G) Scier  | ntific Study   | 541200          |
|            | Total Amount   | 43167377.87     |

Ramesh Kumar D.

DGM (P&S/ Mining)

Kerandari Coal Mining Project

NTPC Mining Limited

## Annexure-I

## NTPC Mining Limited Kerandari Coal Mining Project Effluent Treatment Plant of 20 KLD







Registered by Jharkhand State Pollution Control Board (JSPCB) Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)



TEST REPORT FUGITIVE EMISSION QUALITY

Format No: 7.8F-05

(Near Coal Dump Area)

| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/037 | Report Issue Date: 10/05/2023                  |
|--|--|
| Job Card No: BES/BGR/KRD/037                     | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/APR/FE/05     | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines                     | Product / Material of Test : Fugitive Emission |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Ger  | neral Information                                 |
|--|---|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |
| Sample Collected By: Nilesh Kumar & Team                             | Sampling Plan Reference : BES-KRD/001A            |
| Sampling Date: 12/04/2023 to 13/04/2023                              | Sample Receiving & Registration Date: 14/04/2023  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to: Surrounding Activities of Mining |

| Sample D  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/04/2023                       | Test End Date : 25/04/2023                       |
| Sampling Location: Near Coal Dump Area (Proposed) |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.44  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 26.70  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 147    |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 209    |  |  |

-END OF REPORT-

#### Declaration : -

61. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

MEN CERVICES

Technical Manager



Registered by Jharkhand State Pollution Control Board (JSPCB)
Certified by: ISO 9001:2015(OMS) & ISO 45001:2018(OHSAS)



Format No: 7.8F-06

## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Coal Handling Point)

Unique Lab Report No : LAB-BES/BGR/KRD/23-24/039 Report Issue Date : 10/05/2023

Job Card No : BES/BGR/KRD/039 Discipline : Chemical

Field Data Sheet Code : BES/BGR/KRD/APR/FE/07 Group : Atmospheric Pollution

Type of Industry : Coal Mines Product / Material of Test : Fugitive Emission

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |  |  |
|--|--|--|
| Protocol : Fugitive Emission   | Type of Sample: Dust Generating Sources            |  |
| Sample Collected By: Nilesh Kumar & Team   | Sampling Plan Reference : BES-KRD/001A             |  |
| Sampling Date: 12/04/2023 to 13/04/2023  | Sample Receiving & Registration Date: 14/04/2023   |  |
| Sample Condition: OK, Preserved & Sealed   | Emission Due to : Surrounding Activities of Mining |  |
| the state of the s |  |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 15/04/2023  | Test End Date: 25/04/2023                        |  |  |  |  |
| Sampling Location: Near Coal Handling Point  |  |  |  |  |  |
| Predominant Wind Direction: From NNW towards SSE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |
|  |  |  |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.69  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 23.09  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 124    |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 174    |  |  |

---END OF REPORT----

### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-06

## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Dewatering Pump)

Unique Lab Report No : LAB-BES/BGR/KRD/23-24/035

Job Card No : BES/BGR/KRD/035

Discipline : Chemical

Field Data Sheet Code : BES/BGR/KRD/APR/FE/03

Group : Atmospheric Pollution

Type of Industry : Coal Mines

Product / Material of Test : Fugitive Emission

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol : Fugitive Emission             | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES-KRD/001A            |  |
| Sampling Date: 11/04/2023 to 12/04/2023  | Sample Receiving & Registration Date: 14/04/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Sample D  | Description                                     |  |  |
|---|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |  |  |
| Test Start Date: 15/04/2023                       | Test End Date: 25/04/2023                       |  |  |
| Sampling Location: Near Dewatering Pump           |   |  |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name: Mr. Prakash Kumar |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 08.31  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.85  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 107    |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 153    |  |  |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements

64. All parameters in this report conforms to the specific standard.



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Format No : 7.8F-06

TEST REPORT FUGITIVE EMISSION QUALITY

(Near Mine Trench)

| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/036 | Report Issue Date: 10/05/2023                  |  |  |
|--|--|--|--|
| Job Card No : BES/BGR/KRD/036                    | Discipline: Chemical                           |  |  |
| Field Data Sheet Code: BES/BGR/KRD/APR/FE/04     | Group : Atmospheric Pollution                  |  |  |
| Type of Industry: Coal Mines                     | Product / Material of Test : Fugitive Emission |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gen                                       | eral Information                                   |
|---|--|
| Protocol: Fugitive Emission               | Type of Sample: Dust Generating Sources            |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES-KRD/001A             |
| Sampling Date: 11/04/2023 to 12/04/2023   | Sample Receiving & Registration Date: 14/04/2023   |
| Sample Condition: OK, Preserved & Scaled  | Emission Due to : Surrounding Activities of Mining |

| Sample I  | Description                                      |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 15/04/2023                       | Test End Date : 25/04/2023                       |  |  |
| Sampling Location: Near Mine Trench               |  |  |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.27  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | µg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 25.08  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 187    |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 196    |  |  |

-END OF REPORT-

#### Declaration : -

01. Reported results are related only to the item tested.

92. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

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Format No: 7.85-06

## TEST REPORT

## FUGITIVE EMISSION QUALITY

(Near Project View Point)

| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/038 | Report Issue Date: 10/05/2023                  |
|--|--|
| Job Card No : BES/BGR/KRD/038                    | Discipline: Chemical                           |
| Field Data Sheet Code : BES/BGR/KRD/APR/FE/06    | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines                     | Product / Material of Test : Fugitive Emission |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |  |
|--|---|--|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES-KRD/001A            |  |  |
| Sampling Date: 12/04/2023 to 13/04/2023  | Sample Receiving & Registration Date : 14/04/2023 |  |  |
| Sample Condition: OK, Preserved & Scaled | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 15/04/2023  | Test End Date: 25/04/2023                        |  |  |  |  |
| Sampling Location: Near Project View Point   |  |  |  |  |  |
| Predominant Wind Direction: From NNW towards SSE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                    |  |        |
|-----------------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No        | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 07.22  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 14.21  |
| 63              | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 127    |
| 04              | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 181    |

---END OF REPORT---

## Declaration : -

- 01. Reported results are related only to the item tested.
- 02. This report is the property of laboratory & should not be used unless advised.
- 03. Items tested are as per the standard requirements.

ested by

64. All parameters in this report conforms to the specific standard.



Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Itt.) Road, Bajra, P.O.: Hehal, Dist. - Ranchi, Jharkhand, Pin.-834005 Email Id: - biocrateny@gmail.com. Mobile No.-7309019812, 8340466751, 9608708372



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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)



Format No: 7.8F-05

## TEST REPORT

## FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 01)

| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/033 | Report Issue Date: 10/05/2023                  |  |  |
|--|--|--|--|
| Job Card No : BES/BGR/KRD/033                    | Discipline: Chemical                           |  |  |
| Field Data Sheet Code : BES/BGR/KRD/APR/FE/01    | Group : Atmospheric Pollution                  |  |  |
| Type of Industry: Coal Mines                     | Product / Material of Test : Fugitive Emission |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |  |
|--|---|--|--|
| Protocol : Fugitive Emission             | Type of Sample: Dust Generating Sources           |  |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES-KRD/001A            |  |  |
| Sampling Date: 11/04/2023 to 12/04/2023  | Sample Receiving & Registration Date: 14/04/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving : 5 °C Temperature at the time of Analysis : 25 ± 2 °C |  |  |  |  |
| Test End Date: 25/04/2023  |  |  |  |  |
|  |  |  |  |  |
| Customer Representative Name : Mr. Prakash Kumar   |  |  |  |  |
|  |  |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 06.64  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 11.28  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 101    |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 143    |  |  |

---END OF REPORT----

## Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parageters in this report conforms to the specific standard.

RONMEN TATOR OF THE PROPERTY O

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Itki Road, Bajra, P.O. Hehal, Dist. - Rawhi, Barkhand. Pin. -834005.
Email Id: - biocrateiv@gmail.com, Mobile No. - 7369019812, 8340466751, 9609708172.



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Format No.: 7.8E-06

## TEST REPORT

## FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

| Unique Lab Report No: LAB-BES/BGR/KRD/23-24/034 | Report Issue Date: 10/05/2023                  |  |  |
|---|--|--|--|
| Job Card No : BES/BGR/KRD/034                   | Discipline: Chemical                           |  |  |
| Field Data Sheet Code: BES/BGR/KRD/APR/FE/02    | Group: Atmospheric Pollution                   |  |  |
| Type of Industry: Coal Mines                    | Product / Material of Test : Fugitive Emission |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By: Nilesh Kumar & Team                             | Sampling Plan Reference : BES-KRD/001A            |  |  |
| Sampling Date: 11/04/2023 to 12/04/2023                              | Sample Receiving & Registration Date: 14/04/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample Description   |   |  |  |  |  |
|--|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |  |  |
| Test Start Date: 15/04/2023  | Test End Date: 25/04/2023                       |  |  |  |  |
| Sampling Location ; Near Soil Dump Yard - 02   |   |  |  |  |  |
| Predominant Wind Direction: From NNW towards SSE   | Customer Representative Name: Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 06.04  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | 15 5182<br>Part-06 | 120  | 10.90  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 92     |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 131    |  |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tysibd are as per the standard requirements.

All parameters in this report conforms to the specific standard.



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TEST REPORT FUGITIVE EMISSION QUALITY

Format No : 7.8F-06

(Near coal Dump Area)

| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/084 | Report Issue Date: 10/06/2023            |  |  |
|---|--|--|--|
| Job Card No : BES/BGR/KRD/084                     | Discipline : Chemical                    |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AQ/05      | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines                      | Product / Material of Test : Air Quality |  |  |
| Type or mounty y word remay                       | Trouber, material of Ten 1 An Quanty     |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                                |  |  |
|--|--|--|
| Type of Sample: Dust Generating Sources            |  |  |
| Sampling Plan Reference : BES-KRD/003A             |  |  |
| Sample Receiving & Registration Date: 13/05/2023   |  |  |
| Emission Due to : Surrounding Activities of Mining |  |  |
|  |  |  |

| Sample Description                                |   |  |  |  |
|---|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C  |  |  |  |
| Test Start Date: 13/05/2023                       | Test End Date: 23/05/2023                       |  |  |  |
| Sampling Location: Near coal Dump Area            |   |  |  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name: Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.49  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 27.11  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 128    |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 199    |  |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report ja, the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





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Format No : 7.8F-06

### TEST REPORT

## FUGITIVE EMISSION QUALITY

(Near Coal Handling Plant)

| Report Issue Date: 10/06/2023            |
|--|
| Discipline: Chemical                     |
| Group: Atmospheric Pollution             |
| Product / Material of Test : Air Quality |
|  |

Client Name & Address : -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |  |  |
|--|--|--|
| Protocol : Air Quality                   | Type of Sample: Dust Generating Sources            |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES-KRD/003A             |  |
| Sampling Date: 12/05/2023 to 13/05/2023  | Sample Receiving & Registration Date: 13/05/2023   |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to : Surrounding Activities of Mining |  |

| Sample Description                              |  |  |  |  |
|---|--|--|--|--|
| Temperature at the time of Analysis : 25 ± 2 °C |  |  |  |  |
| Test End Date: 23/05/2023                       |  |  |  |  |
|   |  |  |  |  |
| Customer Representative Name: Mr. Prakash Kumar |  |  |  |  |
|   |  |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.89  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 21.43  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 118    |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 154    |  |

---END OF REPORT---

#### Declaration: -

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01. Reported results are related only to the item tested.

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 All parameters in this report conforms to the specific standard.



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Format No : 7,8F-06

## TEST REPORT FUGITIVE EMISSION QUALITY

| (Near Dewatering                                  | pump)                         |  |
|---|-------------------------------|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/082 | Report Issue Date: 10/06/2023 |  |
| Job Card No : BES/BGR/KRD/082                     | Discipline: Chemical          |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AQ/03      | Group : Atmospheric Pollution |  |

Product / Material of Test : Air Quality

Work Order No: BGR/KRD/WO/0226/ENVIRONMENT Work Order Date: 24/06/2023 MONITORING/BES/2023-24

Client Name & Address : -M/s NTPC Ltd.

Type of Industry: Coal Mines

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                               |  |  |
|---|--|--|
| Type of Sample: Dust Generating Sources           |  |  |
| Sampling Plan Reference : BES-KRD/003A            |  |  |
| Sample Receiving & Registration Date: 13/05/2023  |  |  |
| Emission Due to: Surrounding Activities of Mining |  |  |
|   |  |  |

| Sample Description   |   |  |  |  |
|--|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |  |
| Test Start Date: 13/05/2023  | Test End Date: 23/05/2023                       |  |  |  |
| Sampling Location : Near Dewatering Pump   |   |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name: Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>z</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 8.21   |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19,07  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 103    |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 129    |  |

---END OF REPORT-

#### Declaration : -

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02. This report is the property of laboratory & should not be used unless advised

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 All parameters in this report conforms to the specific standard.

uthorized Signatory Technical Manager

Add: - Sarveshwari Nugae, Ithi Road, Bajm, P.O - Hehal, Dist - Ranchi, Jharkhand, Pin -834005 Email Id :- biocratexv/cgmail.com. Mobile No - 7369019812, 8340466751, 9608708172



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TEST REPORT FUGITIVE EMISSION QUALITY

(Near Mine Trench)

Format No : 7.8F-06

| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/083 | Report Issue Date: 10/06/2023            |  |  |
|---|--|--|--|
| Job Card No: BES/BGR/KRD/083                      | Discipline : Chemical                    |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AQ/04      | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines                      | Product / Material of Test : Air Quality |  |  |

Client Name & Address : -M/s NTPC Ltd. Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                                |  |  |
|--|--|--|
| Type of Sample: Dust Generating Sources            |  |  |
| Sampling Plan Reference : BES-KRD/003A             |  |  |
| Sample Receiving & Registration Date: 13/05/2023   |  |  |
| Emission Due to : Surrounding Activities of Mining |  |  |
|  |  |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C \ |  |  |  |  |
| Test End Date: 23/05/2023  |  |  |  |  |
|  |  |  |  |  |
| Customer Representative Name: Mr. Prakash Kumar  |  |  |  |  |
|  |  |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.17  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 25.35  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 116    |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 197    |  |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

Tested by

Items tested are as per the standard requirements.
 All parameters in this report conforms to the specific standard.



Authorized Signatory Technical Manager

Add: - Sarveshwan Nagar, tiki Road, Bajra, P.O - Hehal, Dist - Ranchi, Jharkhand, Ptn -834005 Email Id :- biocratenvicemail.com, Mobile No - 7360019812, E340466731, 9608708172



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Format No : 7.8F-06

## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Project View Point)

| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/085 | Report Issue Date: 10/06/2023            |
|---|--|
| Job Card No : BES/BGR/KRD/085                     | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AQ/06      | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                      | Product / Material of Test : Air Quality |

Client Name & Address : -M/s NTPC Ltd. Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |
|--|---|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |
| Sample Collected By: Nilesh Kumar & Team                       | Sampling Plan Reference : BES-KRD/003A            |  |
| Sampling Date: 12/05/2023 to 13/05/2023                        | Sample Receiving & Registration Date: 13/05/2023  |  |
| Sample Condition: OK, Preserved & Sealed                       | Emission Due to: Surrounding Activities of Mining |  |

| Sample Description                                |   |  |  |  |
|---|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |  |  |  |
| Test Start Date: 13/05/2023                       | Test End Date: 23/05/2023                       |  |  |  |
| Sampling Location : Near Project View Point       |   |  |  |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name: Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 6.98   |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 14.13  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 109    |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 167    |  |

---END OF REPORT----

## Declaration : -

Reported results are related only to the item tested.

This report is the property of laboratory & should not be used unless advised.

Items tested are as per the standard requirements.
 All parameters in this report conforms to the specific standard.





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TEST REPORT
FUGITIVE EMISSION QUALITY
(Near Soil Dump Yard - 01)

Format No : 7.8F-05

Unique Lab Report No : LAB- BES/BGR/KRD/23-24/080 Report Issue Date : 10/06/2023

Job Card No : BES/BGR/KRD/080 Discipline : Chemical

Field Data Sheet Code : BES/BGR/KRD/MAY/AQ/01 Group : Atmospheric Pollution

Type of Industry : Coal Mines Product / Material of Test : Air Quality

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                       |   |  |
|---|---|--|
| Protocol : Air Quality                    | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES-KRD/003A            |  |
| Sampling Date: 11/05/2023 to 12/05/2023   | Sample Receiving & Registration Date: 13/05/2023  |  |
| Sample Condition: OK, Preserved & Sealed  | Emission Due to: Surrounding Activities of Mining |  |

| Sample Description   |   |  |  |  |
|--|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |  |
| Test Start Date: 13/05/2023  | Test End Date: 23/05/2023                       |  |  |  |
| Sampling Location: Near Soil Dump Yard - 01  |   |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name: Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 06.15  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 10.96  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 97     |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 113    |  |

-END OF REPORT-

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Tested by





(BIOCRAT ENVIRONMENTAL LAB)

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Format No : 7.8F-05

TEST REPORT

## FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/081 | Report Issue Date: 10/06/2023            |  |  |
|---|--|--|--|
| Job Card No : BES/BGR/KRD/081                     | Discipline : Chemical                    |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AQ/02      | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines                      | Product / Material of Test : Air Quality |  |  |

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By: Nilesh Kumar & Team                       | Sampling Plan Reference : BES-KRD/003A            |  |  |
| Sampling Date: 11/05/2023 to 12/05/2023                        | Sample Receiving & Registration Date: 13/05/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed                       | Emission Due to: Surrounding Activities of Mining |  |  |

| time of Analysis : 25 ± 2 °C   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| /05/2023   |  |  |  |  |  |
|  |  |  |  |  |  |
| tative Name: Mr. Prakash Kumar   |  |  |  |  |  |
|  |  |  |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (50 <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 5.74   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 10.89  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 88     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 112    |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

Items tested are as per the standard requirements.
 All parameters in this report conforms to the specific standard.

uthorized Signatory Technical Manager

Addz - Sarveshwari Nagar, Itki Road, Bajra, P.O - Hehal, Diot - Rauchi, Jharkhand, Pin -834005 Email Id :- biocratene@gmail.com. Mobile No - 7360010812, 8340466751, 9608708172



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Soil Dump Yard - 01)

Format No : 7-8F-06

| Unique Lab Report No: BES/BGR/KRD/23000000011-A                      | Report Issue Date: 26/07/2023            |
|--|--|
| Job Card No : BGR/KRD/0000027  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AQ/01                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Air Quality |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gen  | eral Information                                  |  |  |
|--|---|--|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By: Nilesh Kumar & Team                       | Sampling Plan Reference : BES/SAMPLING/PLAN/AQ/01 |  |  |
| Sampling Date: 26/06/2023 to 27/06/2023                        | Sample Receiving & Registration Date : 28/06/2023 |  |  |
| Sample Condition: OK, Preserved & Sealed                       | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample Description                                |  |  |  |  |
|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |  |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                        |  |  |  |
| Sampling Location: Near Soil Dump Yard - 01       |  |  |  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 6.85   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 11.63  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 104    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 148    |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

92. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements,

04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarvisshwari Nagar, Uki Rond, Bajra, P.O.: Hehat, Dist. - Runchi, Burkhand, Pin. -834005
Email Id: - biocratenv@gmail.com. Mobile No. - 7369019812, 8340466751, 9608708172



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Format No: 7.8F-06

TEST REPORT

## FUGITIVE EMISSION QUALITY

(Soil Dump Yard - 02)

| Unique Lab Report No: BES/BGR/KRD/23000000012-A | Report Issue Date: 26/07/2023            |
|---|--|
| Job Card No : BGR/KRD/0000028                   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AQ/02    | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                    | Product / Material of Test : Air Quality |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT      | Work Order Date: 24/06/2023              |

Client Name & Address : - M/s NTPC Ltd.

MONITORING/BES/2023-24

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |
|--|---|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |
| Sample Collected By: Nilesh Kumar & Team                       | Sampling Plan Reference : BES/SAMPLING/PLAN/AQ/01 |  |
| Sampling Date: 26/06/2023 to 27/06/2023                        | Sample Receiving & Registration Date : 28/06/2023 |  |
| Sample Condition: OK, Preserved & Sealed                       | Emission Due to: Surrounding Activities of Mining |  |

| Sample D   | escription                                       |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 28/06/2023  | Test End Date: 07/07/2023                        |  |  |  |  |
| Sampling Location: Near Soil Dump Yard - 02  |  |  |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 6.19   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 11.24  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 95     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 136    |

---END OF REPORT---

#### Declaration : -

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03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-06

TEST REPORT

FUGITIVE EMISSION QUALITY

(Dewatering Pump)

| Unique Lab Report No: BES/BGR/KRD/23000000013-A                       | Report Issue Date: 26/07/2023            |
|---|--|
| Job Card No : BGR/KRD/0000029   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AQ/03                          | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Air Quality |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol : Air Quality                   | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/SAMPLING/PLAN/AQ/01 |  |
| Sampling Date: 26/06/2023 to 27/06/2023  | Sample Receiving & Registration Date: 28/06/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Sample D  | escription                                       |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                        |  |
| Sampling Location: Near Dewatering Pump           |  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |  |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 8.57   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.44  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 111    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 158    |

---END OF REPORT---

Declaration : -

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03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





## (BIOCRAT ENVIRONMENTAL LAB)

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TEST REPORT FUGITIVE EMISSION QUALITY Format No : 7.8F-06

(Mine Trench)

| Unique Lab Report No: BES/BGR/KRD/23000000014-A                       | Report Issue Date: 26/07/2023            |
|---|--|
| Job Card No : BGR/KRD/0000030   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AQ/04                          | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines  | Product / Material of Test : Air Quality |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol : Air Quality                   | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/SAMPLING/PLAN/AQ/01 |  |
| Sampling Date: 27/06/2023 to 28/06/2023  | Sample Receiving & Registration Date: 28/06/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Sample D  | escription                                       |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                        |  |
| Sampling Location : Near Mine Trench              |  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |  |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.59  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 25.86  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 142    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 203    |

-END OF REPORT-

## Declaration : -

Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All paragaeters in this report conforms to the specific standard.





## (BIOCRAT ENVIRONMENTAL LAB)

Registered by Jharkhand State Pollution Control Board (JSPCB)



Format No: 7.8F-06

Certified by: ISO 9001;2015(OMS) & ISO 45001;2018(OHSAS)

## TEST REPORT FUGITIVE EMISSION QUALITY

(Coal Dump Yard)

Unique Lab Report No: BES/BGR/KRD/23000000015-A Report Issue Date: 26/07/2023 Job Card No : BGR/KRD/0000031 Discipline: Chemical Field Data Sheet Code: BES/BGR/KRD/JUN/AO/05 Group: Atmospheric Pollution Type of Industry: Coal Mines Product / Material of Test : Air Quality

Work Order Date: 24/06/2023 Work Order No: BGR/KRD/WO/0226/ENVIRONMENT MONITORING/BES/2023-24

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By: Nilesh Kumar & Team                       | Sampling Plan Reference : BES/SAMPLING/PLAN/AQ/01 |  |  |
| Sampling Date: 27/06/2023 to 28/06/2023                        | Sample Receiving & Registration Date : 28/06/2023 |  |  |
| Sample Condition: OK, Preserved & Sealed                       | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample D  | escription                                       |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                        |  |
| Sampling Location: Near Coal Dump Yard (Proposed) |  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |  |

|          | Analysis Result  |                   |                             |                    |  |        |
|----------|--|-------------------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit              | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>{Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³             | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.82  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m <sup>3</sup> | 08 Hours                    | IS 5182<br>Part-06 | 120  | 27.53  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³             | 08 Hours                    | IS 5182<br>Part 23 | 250  | 152    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³             | 08 Hours                    | IS 5182<br>Part 04 | 500  | 216    |

---END OF REPORT----

01. Reported results are related only to the item tested.

82. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

84. All parapreters in this report conforms to the specific standard.

wized Signatory Technical Manager

Add: - Sarveshwari Nagar, Ithi Rood, Bajra, P.O - Helval, Dist - Ramehr, Barkhand, Pin - 834005 Email Id :- biocrateny@gmail.com. Mobile No - 7369019812. 8340466751, 9608708172

Page 1 of 1



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Format No : 7.8F-05

## TEST REPORT

## FUGITIVE EMISSION QUALITY

(Project View Point)

| Unique Lab Report No: BES/BGR/KRI)/23000000016-A                     | Report Issue Date: 26/07/2023            |
|--|--|
| Job Card No : BGR/KRD/0000032  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AQ/06                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Air Quality |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol : Air Quality                   | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/SAMPLING/PLAN/AQ/01 |  |
| Sampling Date: 27/06/2023 to 28/06/2023  | Sample Receiving & Registration Date : 28/06/2023 |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Sample Description                                |  |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                        |  |  |
| Sampling Location : Near Project View Point       |  |  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |                   |                             |                    |  |        |
|----------|--|-------------------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit              | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m <sup>3</sup> | 08 Hours                    | IS 5182<br>Part-02 | 120  | 7.44   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³             | 08 Hours                    | IS 5182<br>Part-06 | 120  | 14.65  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³             | 08 Hours                    | IS 5182<br>Part 23 | 250  | 131    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³             | 08 Hours                    | IS 5182<br>Part 04 | 500  | 187    |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parageters in this report conforms to the specific standard.





## (BIOCRAT ENVIRONMENTAL LAB)

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Format No : 7.8F-06

## TEST REPORT FUGITIVE EMISSION QUALITY

(Coal Dump Yard)

| Unique Lab Report No: LAB/REPORTS/BES/00000016                       | Report Issue Date: 05/08/2023            |  |  |
|--|--|--|--|
| Job Card No : BES/0000016A   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AQ/05                         | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Air Quality |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |
|--|---|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |
| Sample Collected By: Nilesh Kumar & Team                       | Sampling Plan Reference : BES/0003                |  |
| Sampling Date: 12/07/2023 to 13/07/2023                        | Sample Receiving & Registration Date: 14/07/2023  |  |
| Sample Condition: OK, Preserved & Scaled                       | Emission Due to: Surrounding Activities of Mining |  |

| Sample D  | escription                                      |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date : 14/07/2023                      | Test End Date: 27/07/2023                       |
| Sampling Location: Near Coal Dump Yard (Proposed) |   |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name: Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.79  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 23.96  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 112    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 187    |

---END OF REPORT---

#### Declaration : -

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- 03. Items tested are as per the standard requirements.
- 04. All parameters in this report conforms to the specific standard.







## (BIOCRAT ENVIRONMENTAL LAB)

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Certified by: 18O 9001:2015(QMS) & 18O 45001:2018(OHSAS)





Format No : 7.8F-05

# TEST REPORT FUGITIVE EMISSION QUALITY

(Coal Handling Plant)

| Unique Lab Report No: LAB/REPORTS/BES/00000018                       | Report Issue Date: 05/08/2023            |
|--|--|
| Job Card No : BES/0000018A   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AQ/07                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines   | Product / Material of Test : Air Quality |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Air Quality                    | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/0003                |  |
| Sampling Date: 12/07/2023 to 13/07/2023  | Sample Receiving & Registration Date: 14/07/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| escription                                       |  |
|--|--|
| Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test End Date: 27/07/2023                        |  |
|  |  |
| Customer Representative Name : Mr. Prakash Kumar |  |
|  |  |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.31  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 24.37  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 131    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | 15 5182<br>Part 04 | 500  | 184    |

--- END OF REPORT----

#### Declaration : -

01. Reported results are related only to the item tested.

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03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.







## (BIOCRAT ENVIRONMENTAL LAB)

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Format No : 7.8F-05

## TEST REPORT FUGITIVE EMISSION QUALITY

(Dewatering Pump)

| Unique Lab Report No: LAB/REPORTS/BES/00000014                       | Report Issue Date: 05/08/2023            |  |
|--|--|--|
| Job Card No : BES/0000014A   | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AQ/03                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Air Quality |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |  |  |
|--|--|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |  |  |
| Sampling Plan Reference : BES/0003                             |  |  |
| Sample Receiving & Registration Date: 14/07/2023               |  |  |
| Emission Due to: Surrounding Activities of Mining              |  |  |
|  |  |  |

| Sample I   | Description                                      |  |  |
|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |
| Test Start Date: 14/07/2023  | Test End Date : 27/07/2023                       |  |  |
| Sampling Location : Near Dewatering Pump   |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          |  | Analysis Result |                             |                    |  |        |
|----------|--|-----------------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit            | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³           | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.04  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³           | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.56  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³           | 08 Hours                    | IS 5182<br>Part 23 | 250  | 86     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³           | 08 Hours                    | IS 5182<br>Part 04 | 500  | 131    |

---END OF REPORT----

#### Declaration : -

81. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.









(BIOCRAT ENVIRONMENTAL LAB)







Format No: 7.8F-06

# TEST REPORT FUGITIVE EMISSION QUALITY

(Mine Trench)

| Unique Lab Report No: LAB/REPORTS/BES/00000015                        | Report Issue Date: 05/08/2023            |
|---|--|
| Job Card No : BES/0000015A  | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AQ/04                          | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines  | Product / Material of Test : Air Quality |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By : Nilesh Kumar & Team                      | Sampling Plan Reference : BES/0003                |  |  |
| Sampling Date: 11/07/2023 to 12/07/2023                        | Sample Receiving & Registration Date: 14/07/2023  |  |  |
| Sample Condition: OK, Preserved & Scaled                       | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 14/07/2023                       | Test End Date : 27/07/2023                       |
| Sampling Location : Near Mine Trench              |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 13.09  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 24.69  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 135    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 194    |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.









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Format No: 7.8F-06

# TEST REPORT FUGITIVE EMISSION QUALITY

(Project View Point)

| Unique Lab Report No: LAB/REPORTS/BES/00000017                       | Report Issue Date: 05/08/2023            |
|--|--|
| Job Card No : BES/0000017A   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AQ/06                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines   | Product / Material of Test : Air Quality |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Air Quality                    | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/0003                |  |
| Sampling Date: 12/07/2023 to 13/07/2023  | Sample Receiving & Registration Date: 14/07/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Sample D   | Description                                     |  |  |
|--|---|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |
| Test Start Date: 14/07/2023  | Test End Date: 27/07/2023                       |  |  |
| Sampling Location: Near Project View Point   |   |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name: Mr. Prakash Kumar |  |  |

|          |  | Analysis Result   |                             |                    |  |        |
|----------|--|-------------------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit              | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³             | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.52  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m <sup>3</sup> | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.83  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³             | 08 Hours                    | IS 5182<br>Part 23 | 250  | 106    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³             | 08 Hours                    | IS 5182<br>Part 04 | 500  | 131    |

---END OF REPORT----

#### Declaration : -

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- 04. All parameters in this report conforms to the specific standard.









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Format No : 7.8F-06

# TEST REPORT FUGITIVE EMISSION QUALITY

(Soil Dump Yard - 01)

| Unique Lab Report No : LAB/REPORTS/BES/00000012                      | Report Issue Date: 05/08/2023            |
|--|--|
| Job Card No : BES/0000012A   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AQ/01                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Air Quality |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By: Nilesh Kumar & Team                       | Sampling Plan Reference : BES/0003                |  |  |
| Sampling Date: 10/07/2023 to 11/07/2023                        | Sample Receiving & Registration Date: 14/07/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed                       | Emission Due to: Surrounding Activities of Mining |  |  |
|  |   |  |  |

| Sample D  | escription                                      |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date: 14/07/2023                       | Test End Date: 27/07/2023                       |
| Sampling Location: Near Soil Dump Yard - 01       |   |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name: Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.52  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 23.18  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 78     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 122    |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

92. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.









## (BIOCRAT ENVIRONMENTAL LAB)

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Format No: 7.8F-05

# TEST REPORT FUGITIVE EMISSION QUALITY

(Soil Dump Yard - 02)

| Unique Lab Report No: LAB/REPORTS/BES/00000013 | Report Issue Date: 05/08/2023            |
|--|--|
| Job Card No : BES/0000013A                     | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AQ/02   | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines                   | Product / Material of Test : Air Quality |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT     | Work Order Date : 24/06/2023             |
| MONITORING/BES/2023-24                         |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |  |  |
|--|---|--|--|--|
| Protocol: Air Quality                    | Type of Sample: Dust Generating Sources           |  |  |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/0003                |  |  |  |
| Sampling Date: 10/07/2023 to 11/07/2023  | Sample Receiving & Registration Date: 14/07/2023  |  |  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |  |  |

| Sample D  | escription                                       |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |
| Test Start Date : 14/07/2023                      | Test End Date: 27/07/2023                        |  |
| Sampling Location: Near Soil Dump Yard - 02       |  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kuman |  |

|          |  |       | Analysis                    | Result             | 21/2   |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test Method<br>No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 9.83   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 21.69  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 69     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 112    |

---END OF REPORT---

## Declaration : -

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## TEST REPORT FUGITIVE EMISSION QUALITY

(Soil Dump Yard - 01)

Format No : 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000023                      | Report Issue Date: 09/09/2023            |
|--|--|
| Job Card No : BES/0000023A   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AQ/05                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Air Quality |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

M/s NTPC Ltd. Client Name & Address : -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By : Nilesh Kumar & Team                      | Sampling Plan Reference : BES/0006                |  |  |
| Sampling Date: 13/08/2023 to 14/08/2023                        | Sample Receiving & Registration Date: 16/08/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed                       | Emission Due to: Surrounding Activities of Mining |  |  |
|  |   |  |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 16/08/2023                       | Test End Date: 28/08/2023                        |
| Sampling Location : Near coal Dump Area           |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                    |  |        |
|-----------------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No        | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.09  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 22.86  |
| 63              | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 105    |
| 04              | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 179    |

---END OF REPORT---

Declaration : -

61. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

63. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.





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Format No ; 7.8F-06

TEST REPORT FUGITIVE EMISSION QUALITY

(Near Coal Handling Plant)

| Unique Lab Report No: LAB/REPORTS/BES/00000025 | Report Issue Date: 09/09/2023            |  |  |  |
|--|--|--|--|--|
| Job Card No: BES/0000025A                      | Discipline: Chemical                     |  |  |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AQ/07   | Group : Atmospheric Pollution            |  |  |  |
| Type of Industry: Coal Mines                   | Product / Material of Test : Air Quality |  |  |  |

Work Order No: BGR/KRD/WO/0226/ENVIRONMENT Work Order Date: 24/06/2023

Client Name & Address : - M/s NTPC Ltd.

MONITORING/BES/2023-24

Kerandari Coal Mining Project, Sikri, Barkagnon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |  |
|--|---|--|--|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |  |  |
| Sample Collected By: Nilesh Kumar & Team                       | Sampling Plan Reference : BES/0006                |  |  |  |
| Sampling Date: 12/08/2023 to 13/08/2023                        | Sample Receiving & Registration Date: 16/08/2023  |  |  |  |
| Sample Condition: OK, Preserved & Sealed                       | Emission Due to: Surrounding Activities of Mining |  |  |  |

| Sample Description                                |   |  |  |  |  |  |
|---|---|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 16/08/2023                       | Test End Date: 28/08/2023                       |  |  |  |  |  |
| Sampling Location: Near Coal Handling Plant       |   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kuma |  |  |  |  |  |

| Analysis Result |  |       |                             |                    |  |        |  |  |
|-----------------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No        | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.86  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 23.78  |  |  |
| 03              | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 126    |  |  |
| 04              | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 177    |  |  |

---END OF REPORT-

Declaration:

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Pritamkon. Tested by





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Format No: 7.8F-05

### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Dewatering pump)

| Report Issue Date: 09/09/2023            |  |
|--|--|
| Discipline: Chemical                     |  |
| Group: Atmospheric Pollution             |  |
| Product / Material of Test : Air Quality |  |
| Work Order Date : 24/06/2023             |  |
|  |  |

M/s NTPC Ltd. Client Name & Address : -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                       |   |  |
|---|---|--|
| Protocol : Air Quality                    | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES/0006                |  |
| Sampling Date: 12/08/2023 to 13/08/2023   | Sample Receiving & Registration Date: 16/08/2023  |  |
| Sample Condition: OK, Preserved & Sealed  | Emission Due to: Surrounding Activities of Mining |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date : 16/08/2023                      | Test End Date: 28/08/2023                        |
| Sampling Location : Near Dewatering Pump          |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumat |

|          |  | 3     | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.56  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.57  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 81     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 129    |

---END OF REPORT---

Declaration: 01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

63. Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.



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Format No: 7.8F-06

# TEST REPORT FUGITIVE EMISSION QUALITY

(Near Mine trench)

Unique Lab Report No : LAB/REPORTS/BES/00000022

Job Card No : BES/0000022A

Discipline : Chemical

Field Data Sheet Code : BES/BGR/KRD/AUG/AQ/04

Group : Atmospheric Pollution

Type of Industry : Coal Mines

Product / Material of Test : Air Quality

Work Order No : BGR/KRD/WO/0226/ENVIRONMENT
MONITORING/BES/2023-24

Work Order Date : 24/06/2023

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                       |   |  |
|---|---|--|
| Protocol : Air Quality                    | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES/0006                |  |
| Sampling Date: 12/08/2023 to 13/08/2023   | Sample Receiving & Registration Date: 16/08/2023  |  |
| Sample Condition: OK, Preserved & Sealed  | Emission Due to: Surrounding Activities of Mining |  |
|   |   |  |

| Sample D  | escription                                      |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date : 16/08/2023                      | Test End Date: 28/08/2023                       |
| Sampling Location : Near Mine Trench              |   |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name: Mr. Prakash Kumar |

|          |  | 7/3   | Analysis                    | Result             | Alexander III  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.56  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 24.02  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 127    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 182    |

---END OF REPORT---

Declaration: -

61. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.

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TEST REPORT FUGITIVE EMISSION QUALITY Format No: 7.8F-06

(Near Project View Area)

| Unique Lab Report No : LAB/REPORTS/BES/00000024                       | Report Issue Date: 09/09/2023            |
|---|--|
| Job Card No : BES/0000024A  | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AQ/06                          | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines  | Product / Material of Test : Air Quality |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                       |  |  |
|---|--|--|
| Protocol: Air Quality                     | Type of Sample: Dust Generating Sources            |  |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES/0006                 |  |
| Sampling Date: 13/08/2023 to 14/08/2023   | Sample Receiving & Registration Date: 16/08/2023   |  |
| Sample Condition: OK, Preserved & Sealed  | Emission Due to : Surrounding Activities of Mining |  |

| Sample D  | escription                                      |  |  |
|---|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C  |  |  |
| Test Start Date: 16/08/2023                       | Test End Date: 28/08/2023                       |  |  |
| Sampling Location : Near Project View Point Area  |   |  |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name: Mr. Prakash Kumar |  |  |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | µg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.95  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.05  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 99     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 122    |

---END OF REPORT----

Declaration : -

01. Reported results are related only to the item tested.

This report is the property of laboratory & should not be used unless advised
 Items tested are as per the standard requirements.

84. All parameters in this report conforms to the specific standard.

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<u>TEST REPORT</u>
<u>FUGITIVE EMISSION QUALITY</u>
(Near Soil Dump Yard – 01)

Format No ; 7.8F-06

Unique Lab Report No : LAB/REPORTS/BES/00000019

Report Issue Date : 09/09/2023

Job Card No : BES/0000019A

Discipline : Chemical

Group : Atmospheric Pollution

Type of Industry : Coal Mines

Product / Material of Test : Air Quality

Work Order No : BGR/KRD/WO/0226/ENVIRONMENT
MONITORING/BES/2023-24

Work Order Date : 24/06/2023

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                               |  |  |
|---|--|--|
| Type of Sample: Dust Generating Sources           |  |  |
| Sampling Plan Reference : BES/0006                |  |  |
| Sample Receiving & Registration Date: 16/08/2023  |  |  |
| Emission Due to: Surrounding Activities of Mining |  |  |
|   |  |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 16/08/2023                       | Test End Date : 28/08/2023                       |
| Sampling Location: Near Soil Dump Yard - 01       |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.02  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 22.88  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 74     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 118    |

---END OF REPORT---

Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

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Format No: 7,8F-06

### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

| Unique Lab Report No : LAB/REPORTS/BES/00000020                       | Report Issue Date: 09/09/2023            |
|---|--|
| Job Card No : BES/0000020A  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AQ/02                          | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Air Quality |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

M/s NTPC Ltd. Client Name & Address : -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Air Quality Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By : Nilesh Kumar & Team                      | Sampling Plan Reference : BES/0006                |  |  |
| Sampling Date: 12/08/2023 to 13/08/2023                        | Sample Receiving & Registration Date: 16/08/2023  |  |  |
| Sample Condition: OK, Preserved & Scaled                       | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample D  | escription                                      |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date: 16/08/2023                       | Test End Date : 28/08/2023                      |
| Sampling Location: Near Soil Dump Yard - 02       |   |
| Predominant Wind Direction : From WNW towards ESE | Customer Representative Name: Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 8.96   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 21.12  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 65     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 78     |

---END OF REPORT----

Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

O3. Items tested are as per the standard requirements.
 O4. All parameters in this report conforms to the specific standard.



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## TEST REPORT FUGITIVE EMISSION QUALITY

Near Coal Dump Area (Proposed)

Format No : 7.8F-05

| Unique Lab Report No ; LAB/REPORTS/BES/00000041                       | Report Issue Date: 10/10/2023                  |
|---|--|
| Job Card No : BES/0000041A  | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/SEP/FE/05                          | Group : Atmospheric Pollution                  |
| Type of Industry : Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023                    |

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gen                                       | eral Information                                  |
|---|---|
| Protocol: Fugitive Emission               | Type of Sample: Dust Generating Sources           |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES/0032                |
| Sampling Date: 12/09/2023 to 13/09/2023   | Sample Receiving & Registration Date: 15/09/2023  |
| Sample Condition: OK, Preserved & Sealed  | Emission Due to: Surrounding Activities of Mining |
| Sample Condition : Ord 1111               |   |

| Sample D  | escription                                       |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 15/09/2023                       | Test End Date: 25/09/2023                        |  |
| Sampling Location : Near coal Dump Area           |  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |  |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.56  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20.63  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 91     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 166    |

---END OF REPORT-

Declaration : -

01. Reported results are related only to the item tested,

02. This report is the property of laboratory & should not be used unless advised.

Items tested are as per the standard requirements.
 All parameters in this report conforms to the specific standard.

thorized Signatory Technical Manager

ld: - Sarvushwari Nagur, ltki Road, Bajra, P.O - In JAN 2 B. nchi, Burkhund, Pin -834005 Emsil Id :- biognaenwiegmail.com. Mobile No - 73p9019812, 8340406751, 9608708172 Add: - Sarvushwari Nagur, Irki Road, Bajra, P.O -1



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### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Coal Handling Plant)

Format No: 7.8F-05

| Unique Lab Report No : LAB/REPORTS/BES/00000043                       | Report Issue Date: 10/10/2023                  |
|---|--|
| Job Card No : BES/0000043A  | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/SEP/FE/07                          | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines  | Product / Material of Test : Fugitive Emission |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                       |   |  |  |
|---|---|--|--|
| Protocol : Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |  |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES/0032                |  |  |
| Sampling Date: 12/09/2023 to 13/09/2023   | Sample Receiving & Registration Date: 15/09/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed  | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample D  | escription                                       |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 15/09/2023                       | Test End Date: 25/09/2023                        |  |  |
| Sampling Location: Near Coal Handling Plant       |  |  |  |
| Predominant Wind Direction : From WNW towards ESE | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.02  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 21.45  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 114    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 169    |

---END OF REPORT----

Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

Items tested the as per the standard requirements.
 All parameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

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#### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Dewatering pump)

Format No: 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000039                       | Report Issue Date: 10/10/2023                |  |
|---|--|--|
| Job Card No : BES/0000039A  | Discipline : Chemical                        |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/FE/03                          | Group : Atmospheric Pollution                |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Fugitive Emissi |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                 |  |

M/s NTPC Ltd. Client Name & Address : -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                       |   |  |  |  |
|---|---|--|--|--|
| Protocol : Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |  |  |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES/0032                |  |  |  |
| Sampling Date: 11/09/2023 to 12/09/2023   | Sample Receiving & Registration Date: 15/09/2023  |  |  |  |
| Sample Condition: OK, Preserved & Sealed  | Emission Due to: Surrounding Activities of Mining |  |  |  |

| Sample D  | escription                                       |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |
| Test Start Date: 15/09/2023                       | Test End Date: 25/09/2023                        |  |
| Sampling Location : Near Dewatering Pump          |  |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumar |  |

|          |  | 77.70 | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 9.91   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 17.35  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 75     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 118    |

---END OF REPORT-

Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

03. Items tested are as per the standard requirements.

All paramyters in this report conforms to the specific standard.





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### TEST REPORT FUGITIVE EMISSION QUALITY

Format No: 7.8F-06

(Near Mine trench)

| Unique Lab Report No : LAB/REPORTS/BES/00000040                       | Report Issue Date: 10/10/2023                  |
|---|--|
| Job Card No : BES/0000040A  | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/SEP/FE/04                          | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines  | Product / Material of Test : Fugitive Emission |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

M/s NTPC Ltd. Client Name & Address : -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By : Nilesh Kumar & Team                            | Sampling Plan Reference : BES/0032                |  |  |
| Sampling Date: 11/09/2023 to 12/09/2023                              | Sample Receiving & Registration Date: 15/09/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to: Surrounding Activities of Mining |  |  |
|  |   |  |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/09/2023                       | Test End Date: 25/09/2023                        |
| Sampling Location : Near Mine Trench              |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.93  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 22,45  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 113    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 171    |

-END OF REPORT-

Declaration: -

01. Reported results are related only to the item tested.

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Items tested are as per the standard requirements.
 All parameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

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### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Project View Area)

Format No: 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000042                       | Report Issue Date: 10/10/2023                  |
|---|--|
| Job Card No : BES/0000042A  | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/SEP/FE/06                          | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines  | Product / Material of Test : Fugitive Emission |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

M/s NTPC Ltd. Client Name & Address : -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gen                                       | eral Information                                  |
|---|---|
| Protocol: Fugitive Emission               | Type of Sample: Dust Generating Sources           |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES/0032                |
| Sampling Date: 12/09/2023 to 13/09/2023   | Sample Receiving & Registration Date: 15/09/2023  |
| Sample Condition: OK, Preserved & Scaled  | Emission Due to: Surrounding Activities of Mining |
|   |   |

| Sample D  | escription                                      |  |
|---|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |  |
| Test Start Date:   5/09/2023                      | Test End Date: 25/09/2023                       |  |
| Sampling Location: Near Project View Point Area   |   |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name: Mr. Prakash Kumar |  |

|          |  | 13/10 | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 9.83   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.26  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 91     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 109    |

---END OF REPORT----

Declaration : -

Reported results are related only to the item tested.

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 Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.



(BIOCRAT ENVIRONMENTAL LAB)

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#### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 01)

Format No: 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000037                       | Report Issue Date: 10/10/2023                  |
|---|--|
| Job Card No : BES/0000037A  | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/SEP/FE/01                          | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines  | Product / Material of Test : Fugitive Emission |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

M/s NTPC Ltd. Client Name & Address : -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                       |   |  |
|---|---|--|
| Protocol: Fugitive Emission               | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES/0032                |  |
| Sampling Date: 11/09/2023 to 12/09/2023   | Sample Receiving & Registration Date: 15/09/2023  |  |
| Sample Condition: OK, Preserved & Sealed  | Emission Due to: Surrounding Activities of Mining |  |
|   |   |  |

| Sample D  | escription                                       |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 15/09/2023                       | Test End Date: 25/09/2023                        |  |
| Sampling Location: Near Soil Dump Yard - 01       |  |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumar |  |

|          | THE STATE OF THE S |                   | Analysis                    | Result             |  |        |
|----------|--|-------------------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )   | μg/m <sup>1</sup> | 08 Hours                    | IS 5182<br>Part-02 | 120  | 9.13   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )  | μg/m³             | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20,69  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm)   | μg/m³             | QB Hours                    | IS 5182<br>Part 23 | 250  | 68     |
| 04       | Suspended Particulate<br>Matter (SPM)  | μg/m³             | 08 Hours                    | IS 5182<br>Part 04 | 500  | 108    |

---END OF REPORT---

Declaration: -

01. Reported results are related only to the item tested.

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04. All parameters in this report conforms to the specific standard.





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### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

| Unique Lab Report No : LAB/REPORTS/BES/00000038                       | Report Issue Date: 10/10/2023                  |
|---|--|
| Job Card No : BES/0000038A  | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/SEP/FE/02                          | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines  | Product / Material of Test : Fugitive Emission |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gen                                       | eral Information                                  |
|---|---|
| Protocol : Fugitive Emission              | Type of Sample: Dust Generating Sources           |
| Sample Collected By : Nilesh Kumar & Team | Sampling Plan Reference : BES/0032                |
| Sampling Date: 11/09/2023 to 12/09/2023   | Sample Receiving & Registration Date: 15/09/2023  |
| Sample Condition: OK. Preserved & Sealed  | Emission Due to: Surrounding Activities of Mining |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/09/2023                       | Test End Date: 25/09/2023                        |
| Sampling Location: Near Soil Dump Yard - 02       |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumar |

|          | The second second  |       | Analysis                    | Result             | All and the  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 8.14   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.39  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 59     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 72     |

---END OF REPORT-

Declaration : -

01. Reported results are related only to the item tested.

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 Items tested are as per the standard requirements.

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All parameters in this report conforms to the specific standard.



drized Signatory Technical Manager

Format No : 7.8F-06



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## TEST REPORT FUGITIVE EMISSION QUALITY

Format No : 7.8F-06

Near Coal Dump Area (Proposed)

| Unique Lab Report No : LAB/REPORTS/BES/00000083                      | Report Issue Date: 08/11/2023                  |
|--|--|
| Job Card No : BES/0000083A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/OCT/FE/05                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol : Fugitive Emission             | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Manish Kumar & Team | Sampling Plan Reference : BES/0064                |  |
| Sampling Date: 11/10/2023 to 12/10/2023  | Sample Receiving & Registration Date: 14/10/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 14/10/2023                       | Test End Date: 28/10/2023                        |
| Sampling Location: Near coal Dump Area            |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                    |  |        |
|-----------------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No        | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.43  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.57  |
| 03              | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 104    |
| 04              | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 183    |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

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04. All parameters in this report conforms to the specific standard.





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### TEST REPORT FUGITIVE EMISSION QUALITY

Format No: 7.8F-06

(Near Coal Handling Plant)

| Unique Lab Report No : LAB/REPORTS/BES/0000085                       | Report Issue Date: 08/11/2023                  |
|--|--|
| Job Card No : BES/0000085A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/OCT/FE/07                         | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Burkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Manish Kumar & Team | Sampling Plan Reference : BES/0064                |  |
| Sampling Date: 11/10/2023 to 12/10/2023  | Sample Receiving & Registration Date: 14/10/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |
|  |   |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 14/10/2023                       | Test End Date: 28/10/2023                        |
| Sampling Location: Near Coal Handling Plant       |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.49  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.15  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 125    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours .                  | IS 5182<br>Part 04 | .500   | 181    |

---END OF REPORT--

#### Declaration : -

01. Reported results are related only to the item tested.

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63. Items tested are as per the standard requirements.

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04. All parameters in this report conforms to the specific standard.





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# TEST REPORT FUGITIVE EMISSION QUALITY

Format, No : 7.8F-06

(Near Dewatering pump)

| Unique Lab Report No : LAB/REPORTS/BES/00000081                      | Report Issue Date: 08/11/2023                  |
|--|--|
| Job Card No : BES/0000081A   | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/OCT/FE/03                         | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |  |  |
|--|--|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources            |  |
| Sample Collected By: Manish Kumar & Team | Sampling Plan Reference : BES/0064                 |  |
| Sampling Date : 10/10/2023 to 11/10/2023 | Sample Receiving & Registration Date: 14/10/2023   |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to : Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 14/10/2023                       | Test End Date: 28/10/2023                        |
| Sampling Location: Near Dewatering Pump           |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | 15 5182<br>Part-02 | 120  | 10.82  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 16.49  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 83     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours .                  | IS 5182<br>Part 04 | 500  | 131    |

---END OF REPORT---

#### Declaration : -

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84. All parameters in this report conforms to the specific standard.





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### TEST REPORT FUGITIVE EMISSION QUALITY

Format No : 7.8F-06

(Near Mine trench)

| Unique Lab Report No : LAB/REPORTS/BES/00000082                      | Report Issue Date: 08/11/2023                  |
|--|--|
| Job Card No : BES/0000082A   | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/OCT/FE/04                         | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                               |  |  |
|---|--|--|
| Type of Sample: Dust Generating Sources           |  |  |
| Sampling Plan Reference : BES/0064                |  |  |
| Sample Receiving & Registration Date: 14/10/2023  |  |  |
| Emission Due to: Surrounding Activities of Mining |  |  |
|   |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 14/10/2023                       | Test End Date: 28/10/2023                        |
| Sampling Location : Near Mine Trench              |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.63  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20.37  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 125    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 189    |

---END OF REPORT-

#### Declaration : -

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04. All parameters in this report conforms to the specific standard.





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### TEST REPORT FUGITIVE EMISSION QUALITY

Format No: 7.8F-06

(Near Project View Area)

| Unique Lab Report No : LAB/REPORTS/BES/00000084                      | Report Issue Date: 08/11/2023                  |
|--|--|
| Job Card No : BES/0000084A   | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/OCT/FE/06                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Manish Kumar & Team | Sampling Plan Reference : BES/0064                |  |
| Sampling Date: 11/10/2023 to 12/10/2023  | Sample Receiving & Registration Date: 14/10/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 14/10/2023                       | Test End Date : 28/10/2023                       |
| Sampling Location: Near Project View Point Area   |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.67  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 17.48  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 103    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours .                  | IS 5182<br>Part 04 | 500  | 120    |

---END OF REPORT----

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarvesbwari Nagae, Illd Road, Bujra, P.O., Hehal, S., Jharkhand, Pio. 834003
Email Id: - biocrateny@gmail.com. Mobile No. - 7369019812, 8340466751, 9608708172



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## TEST REPORT FUGITIVE EMISSION QUALITY

Format No: 7.8F-06

(Near Soil Dump Yard - 01)

| Unique Lab Report No : LAB/REPORTS/BES/00000079                      | Report Issue Date: 08/11/2023                  |
|--|--|
| Job Card No : BES/0000079A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/OCT/FE/01                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                               |  |  |
|---|--|--|
| Type of Sample: Dust Generating Sources           |  |  |
| Sampling Plan Reference : BES/0064                |  |  |
| Sample Receiving & Registration Date: 14/10/2023  |  |  |
| Emission Due to: Surrounding Activities of Mining |  |  |
|   |  |  |

| Sample  | Description                                      |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 14/10/2023                       | Test End Date: 28/10/2023                        |  |
| Sampling Location: Near Soil Dump Yard - 01       |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |  |

|          |  | Analysis Result   |                             |                    |  |        |
|----------|--|-------------------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit              | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³             | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.16  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³             | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18,12  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³             | 08 Hours                    | IS 5182<br>Part 23 | 250  | 73     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m <sup>3</sup> | 08 Hours .                  | IS 5182<br>Part 04 | 500  | 116    |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.

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# TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

Format No: 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000080                      | Report Issue Date: 08/11/2023                  |
|--|--|
| Job Card No : BES/0000080A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/OCT/FE/02                         | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Manish Kumar & Team | Sampling Plan Reference : BES/0064                |  |
| Sampling Date: 10/10/2023 to 11/10/2023  | Sample Receiving & Registration Date: 14/10/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |
|  |   |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 14/10/2023                       | Test End Date: 28/10/2023                        |
| Sampling Location: Near Soil Dump Yard - 02       |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis I                  | Result              |  |        |
|----------|--|-------|-----------------------------|---------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test .<br>Method No | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02  | 120  | 08.96  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | 15 5182<br>Part-06  | 120  | 18.65  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23  | 250  | 66     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours -                  | IS 5182<br>Part 04  | 500  | 81     |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.



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## TEST REPORT FUGITIVE EMISSION QUALITY

Near Coal Dump Area (Proposed)

Format No: 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000114                      | Report Issue Date: 07/12/2023                  |
|--|--|
| Job Card No : BES/0000114A   | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/NOV/FE/05                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Manish Kumar & Team | Sampling Plan Reference : BES/0095                |  |
| Sampling Date: 08/11/2023 to 09/11/2023  | Sample Receiving & Registration Date: 11/11/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Description                                      |
|--|
| Temperature at the time of Analysis : 25 ± 2 °C  |
| Test End Date: 27/11/2023                        |
|  |
| Customer Representative Name : Mr. Prakash Kumar |
|  |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 13.89  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20.12  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 116    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 191    |

---END OF REPORT-

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless adels

03. Items tested are as per the standard requirements,

B4. All parameters in this report conforms to the specific standard.



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Coal Handling Plant)

Format No : 7.8F-08

| Unique Lab Report No : LAB/REPORTS/BES/00000116                      | Report Issue Date: 07/12/2023                  |
|--|--|
| Job Card No : BES/0000116A   | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/NOV/FE/07                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Manish Kumar & Team | Sampling Plan Reference : BES/0064                |  |
| Sampling Date : 10/11/2023               | Sample Receiving & Registration Date: 11/11/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Description  |  |  |  |
|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |
| Test End Date: 27/11/2023  |  |  |  |
|  |  |  |  |
| Customer Representative Name : Mr. Prakash Kumar   |  |  |  |
|  |  |  |  |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 13.68  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20.49  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 132    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 188    |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item texted.

02. This report is the property of laboratory & should not be used unless advised.

03. Items testod are as per the standard requirements.

94. All parameters in this report conforms to the specific standard



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### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Dewatering pump)

Format No: 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000112                      | Report Issue Date: 07/12/2023                  |
|--|--|
| Job Card No : BES/0000112A   | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/NOV/FE/03                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Manish Kumar & Team | Sampling Plan Reference : BES/0095                |  |
| Sampling Date: 07/11/2023 to 08/11/2023  | Sample Receiving & Registration Date: 11/11/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 13/11/2023                       | Test End Date: 27/11/2023                        |
| Sampling Location: Near Dewatering Pump           |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.73  |
| 02       | Oxides of Nitrogen (NO <sub>z</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.15  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 87     |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 142    |

---END OF REPORT--

#### Declaration: -

Reported results are related only to the item tested.

12. This report is the property of laboratory & should not be used and sandyised

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific stam

Authorized Signatory Technical Manager

Add: - Surveylswari Nagar, Itki Road, Bajra, P.O. Hebal, Dist. Ranchi, Jhurkhand. Pin.-834005 Email Id: - biocrateny@gmail.com. Mobile No. - 7369019812, 8340166751, 9608708172.



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Mine trench)

Format No : 7.85-06

| Unique Lab Report No : LAB/REPORTS/BES/00000113 | Report Issue Date: 07/12/2023                 |  |  |
|---|---|--|--|
| Job Card No : BES/0000113A                      | Discipline : Chemical                         |  |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/FE/04    | Group: Atmospheric Pollution                  |  |  |
| Type of Industry : Coal Mines                   | Product / Material of Test : Fugitive Emissio |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT     | Work Order Date : 24/06/2023                  |  |  |
| MONITORING/BES/2023-24                          |   |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gen                                       | eral Information                                  |
|---|---|
| Protocol : Fugitive Emission              | Type of Sample: Dust Generating Sources           |
| Sample Collected By : Manish Kumar & Team | Sampling Plan Reference : BES/0095                |
| Sampling Date: 08/11/2023 to 09/11/2023   | Sample Receiving & Registration Date: 11/11/2023  |
| Sample Condition: OK, Preserved & Sealed  | Emission Due to: Surrounding Activities of Mining |

| Sample  | Description  |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C    |
| Test Start Date: 13/11/2023                       | Test End Date: 27/11/2023                          |
|   |  |
| Sampling Location: Near Mine Trench               | Customer Representative Name : Mr. Prakash Kumar   |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Frances Control |

|          |  |       | Analysis                    | Result             |   |        |
|----------|--|-------|-----------------------------|--------------------|---|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br> Notification GSR 742(E),<br>Dated 25/09/2000 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120   | 13.54  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120   | 21.82  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250   | 133    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500   | 195    |

---END OF REPORT-

Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless

03. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Project View Area)

Unique Lab Report No : LAB/REPORTS/BES/00000115

Report Issue Date : 07/12/2023

Job Card No : BES/0000115A

Discipline : Chemical

Group : Atmospheric Pollution

Type of Industry : Coal Mines

Product / Material of Test : Fugitive Emission

Work Order No: BGR/KRD/WO/0226/ENVIRONMENT Work Order Date: 24/06/2023
MONITORING/BES/2023-24

7 80 8

Client Name & Address : -

M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |  |  |
|--|--|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources            |  |
| Sample Collected By: Manish Kumar & Team | Sampling Plan Reference : BES/0095                 |  |
| Sampling Date: 08/11/2023 to 09/11/2023  | Sample Receiving & Registration Date: 11/11/2023   |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to : Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 13/11/2023                       | Test End Date: 27/11/2023                        |
| Sampling Location: Near Project View Point Area   |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.47  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.26  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 115    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 131    |

-END OF REPORT-

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Puthdrized Signatory Technical Manager

Format No : 7.8F-06



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 01)

Format No : 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000110                      | Report Issue Date: 07/12/2023                  |
|--|--|
| Job Card No : BES/0000110A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/NOV/FE/01                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                               |  |  |
|---|--|--|
| Type of Sample: Dust Generating Sources           |  |  |
| Sampling Plan Reference : BES/0095                |  |  |
| Sample Receiving & Registration Date: 11/11/2023  |  |  |
| Emission Due to: Surrounding Activities of Mining |  |  |
|   |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 13/11/2023                       | Test End Date: 27/11/2023                        |
| Sampling Location: Near Soil Dump Yard = 01       |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.55  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.23  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 78     |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 123    |  |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

82. This report is the property of laboratory & should not be used unless and last.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

Format No : 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000111                      | Report Issue Date: 07/12/2023                  |  |
|--|--|--|
| Job Card No : BES/0000111A   | Discipline: Chemical                           |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/FE/02                         | Group: Atmospheric Pollution                   |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By: Manish Kumar & Team                             | Sampling Plan Reference : BES/0095                |  |  |
| Sampling Date: 07/11/2023 to 08/11/2023                              | Sample Receiving & Registration Date: 11/11/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample Description  |  |  |  |  |  |
|---|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C   | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |  |  |
| Test Start Date: 13/11/2023   | Test End Date: 27/11/2023                        |  |  |  |  |
| Sampling Location: Near Soil Dump Yard - 02   |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE  | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |
| A A THEOREM STATE OF THE PARTY |  |  |  |  |  |

|          | Analysis Result  |                   |                             |                    |  |        |  |
|----------|--|-------------------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit              | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³             | 08 Hours                    | IS 5182<br>Part-02 | 120  | 09.45  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m <sup>3</sup> | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20.17  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³             | 08 Hours                    | IS 5182<br>Part 23 | 250  | 71     |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³             | 08 Hours                    | IS 5182<br>Part 04 | 500  | 86     |  |

---END OF REPORT---

#### Declaration : -

Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless adole

03. Items tested are as per the standard requirements.

04. All paragogers in this report conforms to the specific standard.





#### (BIOCRAT ENVIRONMENTAL LAB)

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### TEST REPORT

#### FUGITIVE EMISSION QUALITY

Near Coal Dump Area (Proposed)

Format No: 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000132                      | Report Issue Date: 09/01/2024                  |  |
|--|--|--|
| Job Card No : BES/0000132A   | Discipline: Chemical                           |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/FE/05                         | Group : Atmospheric Pollution                  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONTTORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |  |
|--|---|--|--|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |  |  |  |
| Sample Collected By: Nilesh Kumar & Team                             | Sampling Plan Reference : BES/0128                |  |  |  |
| Sampling Date: 12/12/2023 to 13/12/2023                              | Sample Receiving & Registration Date: 15/12/2023  |  |  |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to: Surrounding Activities of Mining |  |  |  |

| Sample Description                                |  |  |  |  |
|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |  |
| Test Start Date : 15/12/2023                      | Test End Date: 30/12/2023                        |  |  |  |
| Sampling Location: Near Coal Dump Area            |  |  |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.34  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.67  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 109    |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 179    |  |

---END OF REPORT---

#### Declaration : -

Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.





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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Coal Handling Plant)

Format No : 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000134                      | Report Issue Date: 09/01/2024                  |  |
|--|--|--|
| Job Card No : BES/0000134A   | Discipline: Chemical                           |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/FE/07                         | Group : Atmospheric Pollution                  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information   |   |  |  |
|---|---|--|--|
| Protocol: Fugitive Emission Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By: Nilesh Kumar & Team                            | Sampling Plan Reference : BES/0128                |  |  |
| Sampling Date: 12/12/2023 to 13/12/2023                             | Sample Receiving & Registration Date: 15/12/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed                            | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample Description                                |  |  |  |  |
|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |  |
| Test Start Date: 15/12/2023                       | Test End Date: 30/12/2023                        |  |  |  |
| Sampling Location: Near Coal Handling Plant       |  |  |  |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.72  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.44  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 118    |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 176    |  |  |

---END OF REPORT---

#### Declaration : -

91. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items testestare as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

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### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Dewatering pump)

Unique Lab Report No : LAB/REPORTS/BES/00000130

Report Issue Date : 09/01/2024

Joh Card No : BES/0000130A

Discipline : Chemical

Group : Atmospheric Pollution

Type of Industry : Coal Mines

Product / Material of Test : Fugitive Emission

Work Order No : BGR/KRD/WO/0226/ENVIRONMENT
MONITORING/BES/2023-24

Work Order Date : 24/06/2023

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/0128                |  |
| Sampling Date: 11/12/2023 to 12/12/2023  | Sample Receiving & Registration Date: 15/12/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |
|  |   |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/12/2023                       | Test End Date: 30/12/2023                        |
| Sampling Location: Near Dewatering Pump           |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.69  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 17,24  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 81.0   |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 137    |  |  |

---END OF REPORT---

#### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.



Authorized Signatory Technical Manager

Format No: 7.8F-06



#### (BIOCRAT ENVIRONMENTAL LAB)

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# TEST REPORT FUGITIVE EMISSION QUALITY

(Near Mine trench)

| Unique Lab Report No : LAB/REPORTS/BES/00000131                      | Report Issue Date: 09/01/2024                  |  |  |
|--|--|--|--|
| Job Card No : BES/0000131A   | Discipline : Chemical                          |  |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/FE/04                         | Group: Atmospheric Pollution                   |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |  |
|--|---|--|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/0128                |  |  |
| Sampling Date: 11/12/2023 to 12/12/2023  | Sample Receiving & Registration Date: 15/12/2023  |  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample  | Description                                      |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 15/12/2023                       | Test End Date: 30/12/2023                        |  |  |
| Sampling Location : Near Mine Trench              |  |  |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.52  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.95  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 120    |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 182    |  |

---END OF REPORT----

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.



Authorized Signatory Technical Manager

Tested by

Format No : 7.8F-05



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#### TEST REPORT

Format No : 7.8F-06

#### FUGITIVE EMISSION QUALITY

(Near Project View Area)

| Report Issue Date: 09/01/2024                  |
|--|
| Discipline : Chemical                          |
| Group : Atmospheric Pollution                  |
| Product / Material of Test : Fugitive Emission |
| Work Order Date : 24/06/2023                   |
|  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gen                                      | eral Information                                  |
|--|---|
| Protocol : Fugitive Emission             | Type of Sample: Dust Generating Sources           |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/0128                |
| Sampling Date: 12/12/2023 to 13/12/2023  | Sample Receiving & Registration Date: 15/12/2023  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |

| Sample Description                                |  |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 15/12/2023                       | Test End Date: 30/12/2023                        |  |  |
| Sampling Location: Near Project View Point Area   |  |  |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.52  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.39  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 106    |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 122    |  |  |

---END OF REPORT----

#### Declaration : -

01. Reported results are related only to the item tested.

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03. Items tested the as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





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#### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 01)

Format No : 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000128                      | Report Issue Date: 09/01/2024                  |  |  |
|--|--|--|--|
| Job Card No : BES/0000128A   | Discipline: Chemical                           |  |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/FE/01                         | Group: Atmospheric Pollution                   |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |  |  |
|--|--|--|
| Protocol : Fugitive Emission             | Type of Sample: Dust Generating Sources            |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/0128                 |  |
| Sampling Date: 11/12/2023 to 12/12/2023  | Sample Receiving & Registration Date: 15/12/2023   |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to : Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/12/2023                       | Test End Date: 30/12/2023                        |
| Sampling Location: Near Soil Dump Yard - 01       |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |             |                             |                    |  |        |
|-----------------|--|-------------|-----------------------------|--------------------|--|--------|
| SI<br>No        | Specific Test Performed                                    | Unit        | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³       | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.81  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                      | $\mu g/m^3$ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.63  |
| 03              | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³       | 08 Hours                    | IS 5182<br>Part 23 | 250  | 75.0   |
| 04              | Suspended Particulate<br>Matter (SPM)                      | μg/m³       | 08 Hours                    | IS 5182<br>Part 04 | 500  | 119    |

---END OF REPORT----

#### Declaration : -

91. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





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Registered by Jharkhand State Pollution Control Board (JSPCB)

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#### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

Report Issue Date: 09/01/2024 Unique Lab Report No: LAB/REPORTS/BES/00000129 Discipline: Chemical Field Data Sheet Code: BES/BGR/KRD/DEC/FE/02 Group: Atmospheric Pollution

Type of Industry: Coal Mines Product / Material of Test: Fugitive Emission

Work Order No: BGR/KRD/WO/0226/ENVIRONMENT Work Order Date : 24/06/2023 MONITORING/BES/2023-24

Client Name & Address : - M/s NTPC Ltd.

Job Card No : BES/0000129A

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                      |   |  |
|--|---|--|
| Protocol: Fugitive Emission              | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Nilesh Kumar & Team | Sampling Plan Reference : BES/0128                |  |
| Sampling Date: 11/12/2023 to 12/12/2023  | Sample Receiving & Registration Date: 15/12/2023  |  |
| Sample Condition: OK, Preserved & Sealed | Emission Due to: Surrounding Activities of Mining |  |

| Sample   | Description                                      |  |  |
|--|--|--|--|
| Sample Temperature at the time of receiving : $5  ^{\circ}\text{C}$ Temperature at the time of Analysis : $25 \pm 2  ^{\circ}$ |  |  |  |
| Test Start Date: 15/12/2023  | Test End Date: 30/12/2023                        |  |  |
| Sampling Location: Near Soil Dump Yard - 02  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |

| Analysis Result |  |       |                             |                    |  |        |
|-----------------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No        | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | 15 5182<br>Part-02 | 120  | 08,51  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.67  |
| 03              | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 68.0   |
| 04              | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 82.0   |

---END OF REPORT----

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard,



Authorized Signatory Technical Manager

Format No: 7.8F-06



(BIOCRAT ENVIRONMENTAL LAB)

Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)

## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 01)

Unique Lab Report No : LAB/REPORTS/BES/00000162

Report Issue Date : 07/02/2024

Job Card No : BES/0000162A

Discipline : Chemical

Group : Atmospheric Pollution

Type of Industry : Coal Mines

Product / Material of Test : Fugitive Emission

Work Order No : BGR/KRD/WO/0226/ENVIRONMENT

Work Order Date : 24/06/2023

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

MONITORING/BES/2023-24

| General Information                          |  |  |
|--|--|--|
| Protocol: Fugitive Emission                  | Type of Sample: Dust Generating Sources            |  |
| Sample Collected By: Manish Kr. Singh & Team | Sampling Plan Reference : BES/0170                 |  |
| Sampling Date: 09/01/2024 to 10/01/2024      | Sample Receiving & Registration Date: 13/01/2024   |  |
| Sample Condition: OK, Preserved & Scaled     | Emission Due to : Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 13/01/2024                       | Test End Date: 27/01/2024                        |
| Sampling Location: Near Soil Dump Yard - 01       |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                    |  |        |
|-----------------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No        | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.87  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20.93  |
| 03              | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 107    |
| 04              | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 133    |

---END OF REPORT---

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advisud-

63. Items tested are as per the standard requirements.

ested by

04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Format No : 7.8F-06



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

Formet No : 7.8F-05

| Unique Lab Report No : LAB/REPORTS/BES/00000163                       | Report Issue Date: 07/02/2024                  |  |  |
|---|--|--|--|
| Job Card No : BES/0000163A  | Discipline: Chemical                           |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/FE/02                          | Group: Atmospheric Pollution                   |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Fugitive Emission |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                          |   |  |
|--|---|--|
| Protocol: Fugitive Emission                  | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Manish Kr. Singh & Team | Sampling Plan Reference : BES/0170                |  |
| Sampling Date: 09/01/2024 to 10/01/2024      | Sample Receiving & Registration Date: 13/01/2024  |  |
| Sample Condition: OK, Preserved & Sealed     | Emission Due to: Surrounding Activities of Mining |  |

| Sample  | Description                                      |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 13/01/2024                       | Test End Date: 27/01/2024                        |  |  |
| Sampling Location: Near Soil Dump Yard - 02       |  |  |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 10.16  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 21.13  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 76.0   |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 95.0   |  |

---END OF REPORT---

#### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.



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# TEST REPORT FUGITIVE EMISSION QUALITY

(Near Dewatering pump)

Format No: 7,85-05

| Unique Lab Report No : LAB/REPORTS/BES/00000164                       | Report Issue Date: 07/02/2024                  |  |  |
|---|--|--|--|
| Job Card No : BES/0000164A  | Discipline: Chemical                           |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/FE/03                          | Group: Atmospheric Pollution                   |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Fugitive Emission |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                          |   |  |  |
|--|---|--|--|
| Protocol: Fugitive Emission                  | Type of Sample: Dust Generating Sources           |  |  |
| Sample Collected By: Manish Kr. Singh & Team | Sampling Plan Reference : BES/0170                |  |  |
| Sampling Date: 09/01/2024 to 10/01/2024      | Sample Receiving & Registration Date: 13/01/2024  |  |  |
| Sample Condition: OK, Preserved & Sealed     | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample Description                                |  |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 13/01/2024                       | Test End Date: 27/01/2024                        |  |  |
| Sampling Location: Near Dewstering Pump           |  |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |        |                             |                    |  |        |
|----------|--|--------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit   | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | Jrg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.45  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³  | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.57  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³  | 08 Hours                    | IS 5182<br>Part 23 | 250  | 94.0   |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³  | 08 Hours                    | IS 5182<br>Part 04 | 500  | 149    |

---END OF REPORT---

#### Declaration: -

01. Reported results are related only to the item tested.

62. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

84. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, 10ci Rond, Dajra, Physhal Phys. - Ranchi, Burkhand, Pin -834005.

Email Id: - biocratenvi@mail.com. Mobile Na - 7369019812, 8340466751, 9608708172.



(BIOCRAT ENVIRONMENTAL LAB)

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Certified by: ISO 9001:2015(OMS) & ISO 45001:2018(OHSAS)

## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Mine Trench)

Unique Lab Report No : LAB/REPORTS/BES/00000165

Report Issue Date : 07/02/2024

Job Card No : BES/0000165A

Discipline : Chemical

Group : Atmospheric Pollution

Type of Industry : Coal Mines

Product / Material of Test : Fugitive Emission

Work Order No : BGR/KRD/WO/0226/ENVIRONMENT
MONITORING/BES/2023-24

Work Order Date : 24/06/2023

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information   |  |  |
|---|--|--|
| Protocol: Fugitive Emission Type of Sample: Dust Generating Sources |  |  |
| Sampling Plan Reference : BES/0170                                  |  |  |
| Sample Receiving & Registration Date: 13/01/2024                    |  |  |
| Emission Due to: Surrounding Activities of Mining                   |  |  |
|   |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 13/01/2024                       | Test End Date: 27/01/2024                        |
| Sampling Location: Near Mine Trench               |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 13.68  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20.43  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 131    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 198    |

---END OF REPORT---

#### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless ad

03. Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Format No : 7,8E-06-



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## TEST REPORT FUGITIVE EMISSION QUALITY

Near Coal Dump Area (Proposed)

Formet No: 7.85-06

| Unique Lab Report No : LAB/REPORTS/BES/00000166                      | Report Issue Date: 07/02/2024                  |  |  |
|--|--|--|--|
| Job Card No : BES/0000166A   | Discipline: Chemical                           |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/FE/05                         | Group: Atmospheric Pollution                   |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |  |  |  |
|--|--|--|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |  |  |  |
| Sample Collected By: Manish Kr. Singh & Team                         | Sampling Plan Reference : BES/0170                 |  |  |
| Sampling Date: 10/01/2024 to 11/01/2024                              | Sample Receiving & Registration Date: 13/01/2024   |  |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to : Surrounding Activities of Mining |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date : 13/01/2024                      | Test End Date: 27/01/2024                        |
| Sampling Location: Near Coal Dump Area            |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 14.83  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 21.55  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 152    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 287    |

---END OF REPORT----

#### Declaration: -

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04. All parameters in this report conforms to the specific standard.



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Project View Area)

Format No : 7:8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000167                       | Report Issue Date: 07/02/2024                  |  |  |
|---|--|--|--|
| Job Card No : BES/0000167A  | Discipline : Chemical                          |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/FE/06                          | Group: Atmospheric Pollution                   |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Fugitive Emission |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023                    |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |
|--|---|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |  |
| Sample Collected By: Manish Kr. Singh & Team                         | Sampling Plan Reference : BES/0170                |  |
| Sampling Date: 10/01/2024 to 11/01/2024                              | Sample Receiving & Registration Date: 13/01/2024  |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to: Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 13/01/2024                       | Test End Date: 27/01/2024                        |
| Sampling Location: Near Project View Point Area   |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.91  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.54  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 113    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 129    |

---END OF REPORT----

#### Declaration: -

01. Reported results are related only to the item texted.

62. This report is the property of laboratory & should not be used unless advised

63. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Coal Handling Plant)

Unique Lab Report No : LAB/REPORTS/BES/00000168 Report Issue Date : 07/02/2024

Job Card No : BES/0000168A Discipline : Chemical

Field Data Sheet Code : BES/BGR/KRD/JAN/FE/07 Group : Atmospheric Pollution

Type of Industry : Coal Mines Product / Material of Test : Fugitive Emission

W. 1.0.1. Pub. 24/96/2023

Work Order No: BGR/KRD/WO/0226/ENVIRONMENT Work Order Date: 24/06/2023
MONITORING/BES/2023-24

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information   |  |  |  |
|---|--|--|--|
| Protocol: Fugitive Emission Type of Sample: Dust Generating Sources |  |  |  |
| Sample Collected By: Manish Kr. Singh & Team                        | Sampling Plan Reference : BES/0170                 |  |  |
| Sampling Date: 10/01/2024 to 11/01/2024                             | Sample Receiving & Registration Date: 13/01/2024   |  |  |
| Sample Condition: OK, Preserved & Sealed                            | Emission Due to : Surrounding Activities of Mining |  |  |
|   |  |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 13/01/2024                       | Test End Date: 27/01/2024                        |
| Sampling Location: Near Coal Handling Plant       |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>{Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 13.45  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20.56  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 148    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 233    |

---END OF REPORT---

#### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Format No: 7.8F-06



Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)

### TEST REPORT

Format No : 7.8F-06

## FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 01)

| Unique Lab Report No : LAB/REPORTS/BES/00000191                      | Report Issue Date: 09/03/2024                  |
|--|--|
| Job Card No : BES/0000191A   | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/FEB/FE/01                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By: Manish Kr. Singh & Team                         | Sampling Plan Reference : BES/0205                |  |  |
| Sampling Date: 12/02/2024 to 13/02/2024                              | Sample Receiving & Registration Date: 16/02/2024  |  |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to: Surrounding Activities of Mining |  |  |
| 20 27  | Emission Due to: Surrounding Activities of M      |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 16/02/2024                       | Test End Date: 29/02/2024                        |
| Sampling Location: Near Soil Dump Yard - 01       |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.57  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.31  |
| 0,3      | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 103    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 129    |

---END OF REPORT-

#### Declaration : -

01. Reported results are related only to the item tested.

92. This report is the property of laboratory & should not be used unless advised.

03. Items toded are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

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### TEST REPORT

Format No : 7:8F-06-

## FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

| Unique Lab Report No : LAB/REPORTS/BES/00000192                      | Report Issue Date: 09/03/2024                  |
|--|--|
| Job Card No : BES/0000192A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/FEB/FE/02                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |  |  |
|--|--|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |  |  |
| Sample Collected By: Manish Kr. Singh & Team                         | Sampling Plan Reference : BES/0205                 |  |
| Sampling Date: 12/02/2024 to 13/02/2024                              | Sample Receiving & Registration Date: 16/02/2024   |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to : Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 16/02/2024                       | Test End Date: 29/02/2024                        |
| Sampling Location: Near Soil Dump Yard - 02       |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |                   | Analysis                    | Result             | THE BATTER TO  |        |
|----------|--|-------------------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit              | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³             | 08 Hours                    | IS 5182<br>Part-02 | 120  | 09.24  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m <sup>3</sup> | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19.63  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³             | 08 Hours                    | IS 5182<br>Part 23 | 250  | 71.0   |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³             | 08 Hours                    | IS 5182<br>Part 04 | 500  | 93.0   |

-END OF REPORT-

#### Declaration : -

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03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard,





(BIOCRAT ENVIRONMENTAL LAB)

Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)

## TEST REPORT FUGITIVE EMISSION QUALITY

Formet No : 7.8F-05

(Near Dewatering pump)

| Unique Lab Report No : LAB/REPORTS/BES/00000193                      | Report Issue Date: 09/03/2024                  |
|--|--|
| Job Card No : BES/0000193A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/FEB/FE/03                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |  |
|--|---|--|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |  |  |
| Sample Collected By: Manish Kr. Singh & Team                         | Sampling Plan Reference : BES/0205                |  |  |
| Sampling Date: 12/02/2024 to 13/02/2024                              | Sample Receiving & Registration Date: 16/02/2024  |  |  |
| Sample Condition: OK, Preserved & Scaled                             | Emission Due to: Surrounding Activities of Mining |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 16/02/2024                       | Test End Date: 29/02/2024                        |
| Sampling Location: Near Dewatering Pump           |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.67  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | 15 5182<br>Part-06 | 120  | 18.23  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 90.0   |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 145    |

-END OF REPORT-

#### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested fire as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(OMS) & ISO 45001:2018(OHSAS)

### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Mine Trench)

Format No: 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000194                      | Report Issue Date: 09/03/2024                  |
|--|--|
| Job Card No : BES/0000194A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/FEB/FE/04                         | Group : Atmospheric Pollution                  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                          |  |  |  |
|--|--|--|--|
| Protocol : Fugitive Emission                 | Type of Sample: Dust Generating Sources            |  |  |
| Sample Collected By: Manish Kr. Singh & Team | Sampling Plan Reference : BES/0205                 |  |  |
| Sampling Date: 12/02/2024 to 13/02/2024      | Sample Receiving & Registration Date: 16/02/2024   |  |  |
| Sample Condition: OK, Preserved & Scaled     | Emission Due to : Surrounding Activities of Mining |  |  |
|  |  |  |  |

| Sample   | Description   |  |  |  |
|--|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |  |
| Test Start Date: 16/02/2024  | Test End Date: 29/02/2024   |  |  |  |
| Sampling Location: Near Mine Trench  | I amount of the second of the |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar  |  |  |  |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | 15 5182<br>Part-02 | 120  | 12.53  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 19,47  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 128    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 195    |

--- END OF REPORT-

### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

63. Items tested gra, as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(QHSAS)

### TEST REPORT

Format No : 7.8F-06

### FUGITIVE EMISSION QUALITY

Near Coal Dump Area (Proposed)

| Unique Lab Report No : LAB/REPORTS/BES/00000195                      | Report Issue Date: 09/03/2024                  |
|--|--|
| Job Card No : BES/0000195A   | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/FEB/FE/05                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                          |  |  |  |
|--|--|--|--|
| Protocol : Fugitive Emission                 | Type of Sample: Dust Generating Sources            |  |  |
| Sample Collected By: Manish Kr. Singh & Team | Sampling Plan Reference : BES/0205                 |  |  |
| Sampling Date: 13/02/2024 to 14/02/2024      | Sample Receiving & Registration Date: 16/02/2024   |  |  |
| Sample Condition: OK, Preserved & Scaled     | Emission Due to : Surrounding Activities of Mining |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 16/02/2024                       | Test End Date: 29/02/2024                        |
| Sampling Location: Near Coal Dump Area            |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | TO STATE OF THE PARTY OF THE PA |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )   | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 13.68  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )  | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 20.35  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm)   | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 147    |
| 04       | Suspended Particulate<br>Matter (SPM)  | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 280    |

-END OF REPORT-

### Declaration : -

01. Reported results are related only to the item tested.

62. This report is the property of laboratory & should not be used unless advised.

63. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

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### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Project View Area)

Unique Lab Report No : LAB/REPORTS/BES/00000196 Report Issue Date : 09/03/2024

Job Card No : BES/0000196A Discipline : Chemical

Field Data Sheet Code : BES/BGR/KRD/FEB/FE/06 Group : Atmospheric Pollution

Type of Industry : Coal Mines Product / Material of Test : Fugitive Emission

Work Order No: BGR/KRD/WO/0226/ENVIRONMENT Work Order Date: 24/06/2023 MONITORING/BES/2023-24

Client Name & Address : -

M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                          |   |  |
|--|---|--|
| Protocol : Fugitive Emission                 | Type of Sample: Dust Generating Sources           |  |
| Sample Collected By: Manish Kr. Singh & Team | Sampling Plan Reference : BES/0205                |  |
| Sampling Date: 13/02/2024 to 14/02/2024      | Sample Receiving & Registration Date: 16/02/2024  |  |
| Sample Condition: OK, Preserved & Sealed     | Emission Due to: Surrounding Activities of Mining |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 16/02/2024                       | Test End Date: 29/02/2024                        |
| Sampling Location: Near Project View Point Area   |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.72  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.57  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 108    |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 126    |  |

---END OF REPORT-

#### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

63. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.



Authorized Signatory Technical Manager

Format No : 7.8F-06-



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## TEST REPORT FUGITIVE EMISSION QUALITY

Format No : 7.8F- 05

(Near Coal Handling Plant)

| Unique Lab Report No : LAB/REPORTS/BES/00000197                      | Report Issue Date: 09/03/2024                  |
|--|--|
| Job Card No : BES/0000197A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/FEB/FE/07                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                          |  |  |  |
|--|--|--|--|
| Protocol : Fugitive Emission                 | Type of Sample: Dust Generating Sources            |  |  |
| Sample Collected By: Manish Kr. Singh & Team | Sampling Plan Reference : BES/0205                 |  |  |
| Sampling Date: 13/02/2024 to 14/02/2024      | Sample Receiving & Registration Date: 16/02/2024   |  |  |
| Sample Condition: OK, Preserved & Scaled     | Emission Due to : Surrounding Activities of Mining |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 16/02/2024                       | Test End Date: 29/02/2024                        |
| Sampling Location: Near Coal Handling Plant       |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.29  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 18.76  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 143    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 229    |

---END OF REPORT-

#### Declaration: -

01. Reported results are related only to the item tested.

62. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)

## TEST REPORT

(Near Soil Dump Yard - 01)

FUGITIVE EMISSION QUALITY

| Unique Lab Report No : LAB/REPORTS/BES/00000247                      | Report Issue Date: 06/04/2024                  |
|--|--|
| Job Card No : BES/0000254A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/MAR/FE/01                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                                |  |  |  |  |
|--|--|--|--|--|
| Type of Sample: Dust Generating Sources            |  |  |  |  |
| Sampling Plan Reference : BES/0245                 |  |  |  |  |
| Sample Receiving & Registration Date: 15/03/2024   |  |  |  |  |
| Emission Due to : Surrounding Activities of Mining |  |  |  |  |
|  |  |  |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/03/2024                       | Test End Date: 30/03/2024                        |
| Sampling Location: Near Soil Dump Yard - 01       |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                    |  |        |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.94  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 21.51  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | 15 5182<br>Part 23 | 250  | 110    |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 136    |  |

---END OF REPORT-

### Declaration: -

01. Reported results are related only to the item tested.

This report is the property of laboratory & should not be used unless advised.
 Items tested/age as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Surveshwari Nagar, liki Rond, Bujra, P.O - Hichal Romelu, Thurkhund, Pint -834005 Email Id: - biocrateny/a gmml.com. Mobile Na - 7369019812, 8340466751, 9608708172

Format No : 7.8F-05



Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)

## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Soil Dump Yard - 02)

Format No : 7.8F-36

| Unique Lab Report No : LAB/REPORTS/BES/00000248                      | Report Issue Date: 06/04/2024                  |  |  |
|--|--|--|--|
| Job Card No : BES/0000255A   | Discipline: Chemical                           |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/FE/02                         | Group: Atmospheric Pollution                   |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                               |  |  |  |
|---|--|--|--|
| Type of Sample: Dust Generating Sources           |  |  |  |
| Sampling Plan Reference : BES/0245                |  |  |  |
| Sample Receiving & Registration Date: 15/03/2024  |  |  |  |
| Emission Due to: Surrounding Activities of Mining |  |  |  |
|   |  |  |  |

| Sample  | Description                                      |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 15/03/2024                       | Test End Date: 30/03/2024                        |  |
| Sampling Location: Near Soil Dump Yard - 02       |  |  |
| Predominant Wind Direction : From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |

|          | Analysis Result  |       |                             |                    |  |        |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 11.00  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 22.54  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 82.00  |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | µg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 104    |  |  |

---END OF REPORT--

### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Tested by



(BIOCRAT ENVIRONMENTAL LAB)

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### TEST REPORT FUGITIVE EMISSION QUALITY

(Near Dewatering pump)

Format No: 7.8F-06

| Unique Lab Report No : LAB/REPORTS/BES/00000249                      | Report Issue Date: 06/04/2024                  |
|--|--|
| Job Card No : BES/0000256A   | Discipline : Chemical                          |
| Field Data Sheet Code: BES/BGR/KRD/MAR/FE/03                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                          |   |  |  |  |
|--|---|--|--|--|
| Protocol : Fugitive Emission                 | Type of Sample: Dust Generating Sources           |  |  |  |
| Sample Collected By: Manish Kr. Singh & Team | Sampling Plan Reference : BES/0245                |  |  |  |
| Sampling Date: 11/03/2024 to 12/03/2024      | Sample Receiving & Registration Date: 15/03/2024  |  |  |  |
| Sample Condition: OK, Preserved & Sealed     | Emission Due to: Surrounding Activities of Mining |  |  |  |

| Sample  | Description                                      |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |  |
| Test Start Date: 15/03/2024                       | Test End Date: 30/03/2024                        |  |  |
| Sampling Location: Near Dewatering Pump           |  |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          |  |       | Analysis                    | Result             | THE STATE OF THE S |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000]   | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 13.44  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 21.63  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 102    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 154    |

-END OF REPORT---

### Declaration: -

61. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.

SANCH STANCH



(BIOCRAT ENVIRONMENTAL LAB)

Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(QHSAS)

## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Mine Trench)

Report Issue Date: 06/04/2024 Unique Lab Report No: LAB/REPORTS/BES/00000250 Job Card No: BES/0000257A Discipline: Chemical Group: Atmospheric Pollution Field Data Sheet Code: BES/BGR/KRD/MAR/FE/04 Type of Industry: Coal Mines Product / Material of Test : Fugitive Emission Work Order Date: 24/06/2023 Work Order No: BGR/KRD/WO/0226/ENVIRONMENT MONITORING/BES/2023-24

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                               |  |  |  |  |
|---|--|--|--|--|
| Type of Sample: Dust Generating Sources           |  |  |  |  |
| Sampling Plan Reference : BES/0245                |  |  |  |  |
| Sample Receiving & Registration Date: 15/03/2024  |  |  |  |  |
| Emission Due to: Surrounding Activities of Mining |  |  |  |  |
|   |  |  |  |  |

| Sample   | Description                                      |  |  |
|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C  | Temperature at the time of Analysis: 25 ± 2 °C   |  |  |
| Test Start Date: 15/03/2024  | Test End Date: 30/03/2024                        |  |  |
| Sampling Location: Near Mine Trench  |  |  |  |
| Predominant Wind Direction : From NW towards SE  | Customer Representative Name : Mr. Prakash Kumar |  |  |
| The state of the s | Continue respective remove rate a manage remove  |  |  |

|          |  |       | Analysis                    | Result             |  |        |
|----------|--|-------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | IS 5182<br>Part-02 | 120  | 13.70  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m³ | 08 Hours                    | IS 5182<br>Part-06 | 120  | 22.57  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m¹ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 137    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 203    |

-END OF REPORT-

### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

63. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

orized Signatory Technical Manager

Add: - Sarveilawan Nagar, Itla Road, Bagra, P.O - Hehol, 178 schi, Jharkhund, Pin -834005 Email Id :- boccratenvio grand com. Mobile No - 7369019812, 8340466731, 9608708172

Format No: 7.8F-06



(BIOCRAT ENVIRONMENTAL LAB)

Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)

### TEST REPORT FUGITIVE EMISSION QUALITY

Near Coal Dump Area (Proposed)

Format No : 7.8F-05

| Unique Lab Report No : LAB/REPORTS/BES/00000251                      | Report Issue Date: 06/04/2024                  |
|--|--|
| Job Card No : BES/0000258A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/MAR/FE/05                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information                          |   |  |  |  |
|--|---|--|--|--|
| Protocol : Fugitive Emission                 | Type of Sample: Dust Generating Sources           |  |  |  |
| Sample Collected By: Manish Kr. Singh & Team | Sampling Plan Reference : BES/0245                |  |  |  |
| Sampling Date: 12/03/2024 to 13/03/2024      | Sample Receiving & Registration Date: 15/03/2024  |  |  |  |
| Sample Condition: OK, Preserved & Sealed     | Emission Due to: Surrounding Activities of Mining |  |  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/03/2024                       | Test End Date: 30/03/2024                        |
| Sampling Location: Near Coal Dump Area            |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |                   | Analysis                    | Result             |  |        |
|----------|--|-------------------|-----------------------------|--------------------|--|--------|
| SI<br>No | Specific Test Performed                                    | Unit              | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³             | 08 Hours                    | 15 5182<br>Part-02 | 120  | 14.21  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m <sup>1</sup> | 08 Hours                    | IS 5182<br>Part-06 | 120  | 23.00  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m³             | 08 Hours                    | IS 5182<br>Part 23 | 250  | 155    |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³             | 08 Hours                    | IS 5182<br>Part 04 | 500  | 291    |

---END OF REPORT---

### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

83. Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.

SO CO

Authorized Signatory Technical Manager

Add: - Surveshwan Nagar, Itki Road, Hapra, P.O. - Hellin, Familia, Thurkhand, Pin 834005 Email Id: - hocratenvisumail.com. Mobile No. - 7369019812, 8340406751, 9000700172



(BIOCRAT ENVIRONMENTAL LAB)
Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)

## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Project View Area)

Format No : 7.8F-05

| Unique Lab Report No : LAB/REPORTS/BES/00000252                      | Report Issue Date: 06/04/2024                  |
|--|--|
| Job Card No : BES/0000259A   | Discipline: Chemical                           |
| Field Data Sheet Code: BES/BGR/KRD/MAR/FE/06                         | Group: Atmospheric Pollution                   |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |
|--|---|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |  |
| Sample Collected By: Manish Kr. Singh & Team                         | Sampling Plan Reference : BES/0245                |  |
| Sampling Date: 12/03/2024 to 13/03/2024                              | Sample Receiving & Registration Date: 15/03/2024  |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to: Surrounding Activities of Mining |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/03/2024  | Test End Date : 30/03/2024                       |  |  |  |
| Sampling Location: Near Project View Point Area  |  |  |  |  |
| Predominant Wind Direction : From NW towards SE  | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                    |  |        |  |  |
|----------|--|-------------------|-----------------------------|--------------------|--|--------|--|--|
| SI<br>No | Specific Test Performed                                    | Unit              | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³             | 08 Hours                    | IS 5182<br>Part-02 | 120  | 12.86  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | μg/m <sup>3</sup> | 08 Hours                    | IS 5182<br>Part-06 | 120  | 21,49  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 μm) | μg/m³             | 08 Hours                    | IS 5182<br>Part 23 | 250  | 116    |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m <sup>1</sup> | 08 Hours                    | IS 5182<br>Part 04 | 500  | 131    |  |  |

---END OF REPORT-

### Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.



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## TEST REPORT FUGITIVE EMISSION QUALITY

(Near Coal Handling Plant)

Format No : 7.8F- 06

| Unique Lab Report No : LAB/REPORTS/BES/00000253                      | Report Issue Date: 06/04/2024                  |  |  |
|--|--|--|--|
| Job Card No : BES/0000260A   | Discipline: Chemical                           |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/FE/07                         | Group: Atmospheric Pollution                   |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Fugitive Emission |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023                   |  |  |

M/s NTPC Ltd. Client Name & Address : -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| General Information  |   |  |
|--|---|--|
| Protocol : Fugitive Emission Type of Sample: Dust Generating Sources |   |  |
| Sample Collected By: Manish Kr. Singh & Team                         | Sampling Plan Reference : BES/0245                |  |
| Sampling Date : 12/03/2024 to 13/03/2024                             | Sample Receiving & Registration Date: 15/03/2024  |  |
| Sample Condition: OK, Preserved & Sealed                             | Emission Due to: Surrounding Activities of Mining |  |

| Sample   | Description                                      |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/03/2024  | Test End Date: 30/03/2024                        |  |  |  |
| Sampling Location: Near Coal Handling Plant  |  |  |  |  |
| Predominant Wind Direction : From NW towards SE  | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                    |  |        |  |  |  |
|----------|--|-------|-----------------------------|--------------------|--|--------|--|--|--|
| SI<br>No | Specific Test Performed                                    | Unit  | Time<br>Weighted<br>Average | Test<br>Method No  | Air Quality Standard<br>[Notification GSR 742(E),<br>Dated 25/09/2000] | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                         | μg/m³ | 08 Hours                    | I5 5182<br>Part-02 | 120  | 13.61  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                      | µg/m³ | 08 Hours                    | 15 5182<br>Part-06 | 120  | 21,54  |  |  |  |
| 03       | Respirable Particulate<br>Matter<br>(size less than 10 µm) | μg/m¹ | 08 Hours                    | IS 5182<br>Part 23 | 250  | 152    |  |  |  |
| 04       | Suspended Particulate<br>Matter (SPM)                      | μg/m³ | 08 Hours                    | IS 5182<br>Part 04 | 500  | 235    |  |  |  |

-END OF REPORT-

### Declaration: -

01. Reported results are related only to the item tested.
02. This report is the property of laboratory & should not be used unless advised.

63. Items tested are as per the standard requirements.

Tested by

64. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Itki Road, Bajra, P.O - Fiels: hi, Thurkhand, Pin-K34005 Email Id :- bioccutenvia gmail.com. Mobile Nu - 7369010812, 8340466734, 9008700172



(BIOCRAT ENVIRONMENTAL LAB)

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## TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

Format No: 7.8F-04

| FIRST FOR  | INIGHT                                   |
|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/022 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/022                    | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/06    | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|   | Gene             | eral Information                                  |   |  |  |
|---|------------------|---|---|--|--|
| Protocol : Ambient Air  |                  | Type of Sample: Ambient Air                       |   |  |  |
| Sample Collected By : Nilesh  | Kumar & Team     | Sampling Plan Reference                           | : BES-KRD/001A                          |  |  |
| Sampling Date: 12/04/2023 to 13/04/2023<br>Sample Condition: OK, Preserved & Sealed |                  | Sample Receiving & Registration Date : 14/04/2023 |   |  |  |
|   |                  | Emission Due to: Move<br>Surror                   | ment of Vehicles &<br>unding Activities |  |  |
| Metrological Information  | Avg. Temp: 34 °C | Avg. R.Humidity: 51 %                             | Barometric Pressure: 706 mmHg           |  |  |

| Sample D  | escription                                       |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |  |
| Test Start Date: 15/04/2023                       | Test End Date: 25/04/2023                        |  |  |
| Sampling Location: Jordag Village - Buffer Zone   |  |  |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name : Mr. Prakash Kumar |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (5O <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.09  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 19.99  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 68.76  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.84  |  |

---END OF REPORT-

- Norms: NAACIS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCHL of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.

Fested by

64. All parameters in this report conforms to the specific standard.





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TEST REPORT
AMBIENT AIR QUALITY

(Jordag Village)

Format No: 7.8F-04

SECOND FORTNICH

| SECOND FOR                                       | RTNIGHT                                  |
|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/045 | Report Issue Date: 10/05/2023            |
| Job Card No: BES/BGR/KRD/045                     | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/14    | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gene             | eral Information                |   |
|--|------------------|---------------------------------|---|
| Protocol : Ambient Air                   |                  | Type of Sample: Ambient         | Air                                     |
| Sample Collected By : Nilesh             | Kumar & Team     | Sampling Plan Reference         | : BES-KRD/002A                          |
| Sampling Date: 28/04/2023                | o 29/04/2023     | Sample Receiving & Reg          | istration Date: 29/04/2023              |
| Sample Condition: OK, Preserved & Scaled |                  | Emission Due to: Move<br>Surror | ment of Vehicles &<br>anding Activities |
| Metrological Information                 | Avg. Temp: 35 °C | Avg. R.Humidity: 49 %           | Barometric Pressure: 705 mmHg           |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 29/04/2023                       | Test End Date: 06/05/2023                        |
| Sampling Location: Jordag Village - Buffer Zone   |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.17  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 20.19  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 69.45  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 30.14  |

---END OF REPORT----

- Norms: NAACIS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- · Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagae, Itki Road, Bajra, P.O.: Hebal, Dist. Runchi, Jharkhand, Pin. -834003 Email Id :- biocrateny@gmail.com. Mobile No. - 7369019812, 8340466751, 9608708172



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## TEST REPORT AMBIENT AIR QUALITY

(Kerendari Village)

Format No: 7.8F-04

| FIRST FORTNIGHT                                  |  |  |
|--|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/024 | Report Issue Date: 10/05/2023            |  |
| Job Card No : BES/BGR/KRD/024                    | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/08    | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines                     | Product / Material of Test ; Ambient Air |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| / 1000 /                                 | Gene             | eral Information                | (0.00)                                  |
|--|------------------|---------------------------------|---|
| Protocol : Ambient Air                   | The second       | Type of Sample: Ambient         | Air                                     |
| Sample Collected By : Nilesh             | Kumar & Team     | Sampling Plan Reference         | : BES-KRD/001A                          |
| Sampling Date: 12/04/2023 t              |                  | Sample Receiving & Regi         | istration Date: 14/04/2023              |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Move<br>Surror | ment of Vehicles &<br>unding Activities |
| Metrological Information                 | Avg. Temp: 34 °C | Avg. R.Humidity: 51 %           | Barometric Pressure: 706 mmHg           |

| Sample De  |   |
|--|---|
| Sample Temperature at the time of receiving: 5 °C  | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date: 15/04/2023                        | Test End Date: 25/04/2023                       |
| Sampling Location: Kerendari Village – Buffer Zone |   |
| Predominant Wind Direction: From NNW towards SSE   | Customer Representative Name : Mr. Prakash Kuma |

|          |  |       | <b>Analysis Re</b>          | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Suiphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 18.19  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 34.37  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 75.21  |
| 04       | Fine Particulate Matter  | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.19  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of india: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested,
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.



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## TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

Format No: 7.8F-04

| SECOND FOR                                      | RTNIGHT                                  |
|---|--|
| Unique Lab Report No: LAB-BES/BGR/KRD/23-24/047 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/047                   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/16   | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines                    | Product / Material of Test : Ambient Air |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gene             | ral Information                                   | 1 222                                   |  |
|--|------------------|---|---|--|
| Protocol: Ambient Air                    | A V              | Type of Sample: Ambient                           | Air                                     |  |
| Sample Collected By : Nilesh             | Kumar & Team     | Sampling Plan Reference                           | : BES-KRD/002A                          |  |
| Sampling Date: 28/04/2023 to 29/04/2023  |                  | Sample Receiving & Registration Date : 29/04/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Mover<br>Surror                  | ment of Vehicles &<br>anding Activities |  |
| Metrological Information                 | Avg. Temp: 35 °C | Avg. R.Humidity: 49 %                             | Barometric Pressure: 705 mmHg           |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C   | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 29/04/2023                         | Test End Date : 06/05/2023                       |
| Sampling Location : Kerandari Village - Buffer Zone |  |
| Predominant Wind Direction: From NNW towards SSE    | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 18.37  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 34.71  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 75.96  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.50  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/9C/PCFL of 18th November 2009)
- Declaration:
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

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## TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

Format No: 7.8F-04

| FIRST FOR  | INIGHT                                   |
|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/021 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/021                    | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/05    | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air |

Client Name & Address : -M/s NTPC Ltd. Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1.50                                      | Gene             | eral Information                       | 1,263                                   |  |
|---|------------------|--|---|--|
| Protocol : Ambient Air                    |                  | Type of Sample: Ambient                | Air                                     |  |
| Sample Collected By : Nilesh Kumar & Team |                  | Sampling Plan Reference ; BES-KRD/001A |   |  |
| Sampling Date: 12/04/2023 to 13/04/2023   |                  | Sample Receiving & Reg                 | istration Date: 14/04/2023              |  |
| Sample Condition: OK, Preserved & Sealed  |                  | Emission Due to: Move<br>Surror        | ment of Vehicles &<br>anding Activities |  |
| Metrological Information                  | Avg. Temp: 34 °C | Avg. R.Humidity: 51 %                  | Barometric Pressure: 706 mmHg           |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/04/2023 Test End Date: 25/04/2023 |  |
| Sampling Location : Manatu Village - Buffer Zone      |  |
| Predominant Wind Direction: From NNW towards SSE      | Customer Representative Name : Mr. Prakash Kuman |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.82  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.99  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 66.65  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.64  |  |  |

#### ---END OF REPORT---

- Norms: NAACIS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29036/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - This report is the property of laboratory & should not be used unless advised 02.
  - Items tested are as per the standard requirements.
  - All parameters in this report conforms to the specific standard.



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TEST REPORT
AMBIENT AIR QUALITY

Format No: 7.8F-04

(Manatu Village)

| SECOND FOI                                      | RTNIGHT                                  |
|---|--|
| Unique Lab Report No: LAB-BES/BGR/KRD/23-24/044 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/044                   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/13   | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines                    | Product / Material of Test : Ambient Air |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /_0-/                        | Gene             | eral Information                | 1 1000                                  |
|------------------------------|------------------|---------------------------------|---|
| Protocol : Ambient Air       | AN               | Type of Sample: Ambient         | Air                                     |
| Sample Collected By : Nilesh | Kumar & Team     | Sampling Plan Reference         | : BES-KRD/002A                          |
| Sampling Date: 28/04/2023    | to 29/04/2023    | Sample Receiving & Reg          | istration Date: 29/04/2023              |
| Sample Condition: OK, Pre    | served & Sealed  | Emission Due to: Move<br>Surror | ment of Vehicles &<br>unding Activities |
| Metrological Information     | Avg. Temp: 35 °C | Avg. R.Humidity: 49 %           | Barometric Pressure: 705 mmHg           |

| Sample Description                                |  |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 29/04/2023                       | Test End Date : 06/05/2023                       |  |  |
| Sampling Location : Manatu Village - Buffer Zone  |  |  |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name : Mr. Prakash Kumar |  |  |
|   |  |  |  |

|          |  |       | <b>Analysis Re</b>          | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.89  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.15  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 67.32  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.93  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration:
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised:
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(SISF Camp)

| FIRST FOR  | INIGHT                                   |
|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/019 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/019                    | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/03    | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 100/                                     | Gene             | eral Information                 | / 5/83/                                 |
|--|------------------|----------------------------------|---|
| Protocol: Ambient Air                    |                  | Type of Sample: Ambient          | Air                                     |
| Sample Collected By : Nilesh             | Kumar & Team     | Sampling Plan Reference          | ; BES-KRD/001A                          |
| Sampling Date: 11/04/2023                | 0 12/04/2023     | Sample Receiving & Regi          | stration Date: 14/04/2023               |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Mover<br>Surrot | ment of Vehicles &<br>unding Activities |
| Metrological Information                 | Avg. Temp: 34 °C | Avg. R.Humidity: 51 %            | Barometric Pressure: 706 mmHg           |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/04/2023                       | Test End Date: 25/04/2023                        |
| Sampling Location: SISF Camp - Core Zone          |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 15.03  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 28.58  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 64.77  |  |  |
| 94       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.83  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29015/20/90/PCI-L of 18th November 2009)

Declaration: -

#1. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

03. Items tested are as per the standard requirements.

04. All paragifeters in this report conforms to the specific standard.





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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(SISF Camp)

| SECOND FORTNIGHT                                 |  |  |
|--|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/042 | Report Issue Date: 10/05/2023            |  |
| Job Card No : BES/BGR/KRD/042                    | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/11    | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7.75                                      | Gene             | eral Information                                  | 1,242/                                  |  |
|---|------------------|---|---|--|
| Protocol : Ambient Air                    |                  | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By : Nilesh Kumar & Team |                  | Sampling Plan Reference : BES-KRD/002A            |   |  |
| Sampling Date: 27/04/2023 to 28/04/2023   |                  | Sample Receiving & Registration Date : 29/04/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed  |                  | Emission Due to: Move<br>Surro                    | ment of Vehicles &<br>anding Activities |  |
| Metrological Information                  | Avg. Temp: 35 °C | Avg. R.Humidity: 49 %                             | Barometric Pressure: 705 mmHg           |  |

| Sample D   | escription                                       |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| st Start Date : 29/04/2023 Test End Date : 06/05/2023  |  |  |  |  |
| Sampling Location : SISF Camp - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NNW towards SSE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          |  |             | <b>Analysis Re</b>          | sult              |                        |        |
|----------|--|-------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit        | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³       | 24 Hours                    | IS 5182 Part-02   | 80                     | 15.29  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³       | 24 Hours                    | IS 5182 Part-06   | 80                     | 28.86  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | $\mu g/m^3$ | 24 Hours                    | IS 5182 Part 23   | 100                    | 65.41  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³       | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.11  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB-Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised,
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  - 04. All payameters in this report conforms to the specific standard.





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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| FIRST FOR  | INIGHT                                   |
|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/020 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/020                    | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/04    | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1.30                                     | Gene             | eral Information                                 |   |  |
|--|------------------|--|---|--|
| Protocol : Ambient Air                   |                  | Type of Sample: Ambient Air                      |   |  |
| Sample Collected By: Nilesh              | Kumar & Team     | Sampling Plan Reference                          | : BES-KRD/001A                          |  |
| Sampling Date: 11/04/2023 to 12/04/2023  |                  | Sample Receiving & Registration Date: 14/04/2023 |   |  |
| Sample Condition: OK, Preserved & Scaled |                  | Emission Due to: Move<br>Surro                   | ment of Vehicles &<br>anding Activities |  |
| Metrological Information                 | Avg. Temp: 34 °C | Avg. R.Humidity: 51 %                            | Barometric Pressure: 706 mmHg           |  |
|  |                  |  |   |  |

| Sample D  | escription                                       |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 15/04/2023                       | Test End Date: 25/04/2023                        |  |
| Sampling Location: Tarhesa Village - Core Zone    |  |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name : Mr. Prakash Kumar |  |

|          |  |       | <b>Analysis Re</b>          | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.12  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 17.06  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 69.42  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 36.37  |

---END OF REPORT---

- NOP ms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No. B.29016/20/90/PCI-L of 18th November 2009)
- Declaration:
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FORTNIGHT                                |  |  |
|---|--|--|
| Unique Lab Report No: LAB-BES/BGR/KRD/23-24/043 | Report Issue Date: 10/05/2023            |  |
| Job Card No: BES/BGR/KRD/043                    | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/12   | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines                    | Product / Material of Test : Ambient Air |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1.97/                                    | Gene             | eral Information                | 1.700                                   |  |
|--|------------------|---------------------------------|---|--|
| Protocol: Ambient Air                    |                  | Type of Sample: Ambient Air     |   |  |
| Sample Collected By : Nilesh             | Kumar & Team     | Sampling Plan Reference         | : BES-KRD/002A                          |  |
| Sampling Date: 27/04/2023                | to 28/04/2023    | Sample Receiving & Reg          | istration Date: 29/04/2023              |  |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Move<br>Surror | ment of Vehicles &<br>anding Activities |  |
| Metrological Information                 | Avg. Temp: 35 °C |                                 | Barometric Pressure: 705 mmHg           |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 29/04/2023                       | Test End Date : 06/05/2023                       |
| Sampling Location: Tarhesa Village - Core Zone    |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |   |                   |                             |                   |                        |        |  |
|-----------------|---|-------------------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed                           | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.19  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )             | µg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 17.23  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PMso) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 70.11  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )   | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 36.01  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- · Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 3. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Savyeshwari Nagur, Itki Road, Hupa, P.O. Hebal, Dett. - Ranchi, Barkhand. Pln. 434005.
Email Id: - biogratenviligenail.com. Mobile No. - 7369019812, 8340466751, 9608708172.



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TEST REPORT

AMBIENT AIR QUALITY

Format No: 7.8F-04

(Baseria Village)

| FIRST FOR  | INIGHT                                   |
|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/017 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/017                    | Discipline : Chemical                    |
| Field Data Sheet Code : BES/BGR/KRD/APR/AAQ/01   | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| - NA - WO                                | Gene             | eral Information                                 | 1,500                                   |  |
|--|------------------|--|---|--|
| Protocol: Ambient Air                    |                  | Type of Sample: Ambient Air                      |   |  |
| Sample Collected By ; Nilesh             | Kumar & Team     | Sampling Plan Reference                          | : BES-KRD/001A                          |  |
| Sampling Date: 11/04/2023 to 12/04/2023  |                  | Sample Receiving & Registration Date: 14/04/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Move<br>Surror                  | ment of Vehicles &<br>unding Activities |  |
| Metrological Information                 | Avg. Temp: 34 °C | Avg. R.Humidity: 51 %                            | Barometric Pressure: 706 mmHg           |  |

| Sample D   | escription                                       |
|--|--|
| Sample Temperature at the time of receiving: 5 °C      | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/04/2023                            | Test End Date: 25/04/2023                        |
| Sampling Location: Baseria Village (NTPC Camp) - Core. | Zone   |
| Predominant Wind Direction: From NNW towards SSE       | Customer Representative Name : Mr. Prakash Kumar |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.27  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 21.11  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 51.71  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | $\mu g/m^3$       | 24 Hours                    | IS 5182 Part 24   | 60                     | 24.87  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All paramoters in this report conforms to the specific standard.



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## TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

Format No: 7.8F-04

| SECOND FORTNIGHT                                 |  |  |
|--|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/040 | Report Issue Date: 10/05/2023  |  |
| Job Card No : BES/BGR/KRD/040                    | Discipline : Chemical  |  |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/09    | Group: Atmospheric Pollution   |  |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air   |  |
|  | The second secon |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gene             | eral Information                 | 1301                                    |  |
|--|------------------|----------------------------------|---|--|
| Protocol : Ambient Air                   |                  | Type of Sample: Ambient Air      |   |  |
| Sample Collected By : Nilesh             | Kumar & Team     | Sampling Plan Reference          | : BES-KRD/002A                          |  |
| Sampling Date: 27/04/2023                | to 28/04/2023    | Sample Receiving & Regi          | stration Date : 29/04/2023              |  |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Mover<br>Surrou | ment of Vehicles &<br>anding Activities |  |
| Metrological Information                 | Avg. Temp; 35 °C | Avg. R.Humidity: 49 %            | Barometric Pressure: 705 mmHg           |  |

| Sample D   | escription                                       |
|--|--|
| Sample Temperature at the time of receiving: 5 °C      | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 29/04/2023                            | Test End Date: 06/05/2023                        |
| Sampling Location: Baseria Village (NTPC Camp) - Core. | Zone   |
| Predominant Wind Direction: From NNW towards SSE       | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.35  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 21.32  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 52.23  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.12  |  |  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B 29015/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advise
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Itto Road, Bajra, P.O.- Hehal, Dist. - Ranchi, Jharkhand, Pin. -834005 Email Id: - bjocratenv@gmail.com. Mobile No. - 7369019812, 8340466751, 9608708172



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## TEST REPORT AMBIENT AIR QUALITY

(BGR Workshop)

Format No: 7.8F-04

| FIRST FOR  | INIGHT                                   |
|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/018 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/018                    | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/02    | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1 4 /                                    | Gene             | eral Information                 | 1000                                    |  |
|--|------------------|----------------------------------|---|--|
| Protocol: Ambient Air                    |                  | Type of Sample: Ambient Air      |   |  |
| Sample Collected By : Nilesh             | Kumar & Team     | Sampling Plan Reference          | : BES-KRD/001A                          |  |
| Sampling Date: 11/04/2023                | o 12/04/2023     | Sample Receiving & Regi          | istration Date : 14/04/2023             |  |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Mover<br>Surror | ment of Vehicles &<br>inding Activities |  |
| Metrological Information                 | Avg. Temp: 34 °C | Avg. R.Humidity: 51 %            | Barometric Pressure: 706 mmHg           |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/04/2023 Test End Date: 25/04/2023  |  |  |  |  |
| Sampling Location : BGR Workshop - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NNW towards SSE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 11.26  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 25.68  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 72.83  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 32.58  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Itki Road, Bajra, P.O. - Helidis - Ranchi, Barkhand, Pin. -834005 Email 1d: - biocratenyüügmail.com. Mobile No. - 7369019812, 8340466751, 9608708172



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## TEST REPORT AMBIENT AIR QUALITY

(BGR Workshop)

Format No: 7.8F-04

| SECOND FORTNIGHT   |                               |  |
|--|-------------------------------|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/041         | Report Issue Date: 10/05/2023 |  |
| Job Card No : BES/BGR/KRD/041                            | Discipline : Chemical         |  |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/10            | Group : Atmospheric Pollution |  |
| Type of Industry: Coal Mines Product / Material of Test: |                               |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 13/                                      | Gene             | eral Information                | 100                                     |
|--|------------------|---------------------------------|---|
| Protocol : Ambient Air                   | A                | Type of Sample: Ambient         | Air                                     |
| Sample Collected By : Nilesh             | Kumar & Team     | Sampling Plan Reference         | : BES-KRD/002A                          |
| Sampling Date: 27/04/2023                | o 28/04/2023     | Sample Receiving & Reg          | istration Date: 29/04/2023              |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Move<br>Surror | ment of Vehicles &<br>anding Activities |
| Metrological Information                 | Avg. Temp: 35 °C |                                 | Barometric Pressure: 705 mmHg           |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 29/04/2023  | Test End Date: 06/05/2023                        |  |  |  |
| Sampling Location : BGR Workshop - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NNW towards SSE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 11.37  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 25.93  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 73.56  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 32.91  |  |  |

---END OF REPORT---

- NOTITIS: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
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  - 04. All parameters in this report conforms to the specific standard.

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Authorized Signatory Technical Manager

Add: - Narveshwari Nagar, biki Road, Hajia, P.O. Hehal, Diff. Raschi, Jharkhand, Pin. 434005 Email Id: - biocratenviñgmail.com. Mobile No. - 7369019812, 8340466751, 9608700172



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TEST REPORT

AMBIENT AIR QUALITY

Format No: 7.8F-04

(Hewai Village)

| FIRST FOR                                       | INIGHT                                   |
|---|--|
| Unique Lab Report No: LAB-BES/BGR/KRD/23-24/023 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/023                   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/07   | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines                    | Product / Material of Test : Ambient Air |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gene             | eral Information                 | 1,400                                   |
|--|------------------|----------------------------------|---|
| Protocol: Ambient Air                    |                  | Type of Sample: Ambient          | Air                                     |
| Sample Collected By : Nilesh             | Kumar & Team     | Sampling Plan Reference          | : BES-KRD/001A                          |
| Sampling Date: 12/04/2023                | o 13/04/2023     | Sample Receiving & Regi          | istration Date: 14/04/2023              |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Mover<br>Surrou | ment of Vehicles &<br>anding Activities |
| Metrological Information                 | Avg. Temp: 34 °C | Avg. R.Humidity: 51 %            | Barometric Pressure: 706 mmHg           |

| Sample D  | escription                                       |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 15/04/2023                       | Test End Date: 25/04/2023                        |  |  |
| Sampling Location: Hewai Village - Buffer Zone    |  |  |  |
| Predominant Wind Direction: From NNW towards SSE  | Customer Representative Name : Mr. Prakash Kumar |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.10  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.35  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 56.64  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.39  |  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8,29016/20/90/PCI-L of 18th November 2009)
- · Declaration: -
  - 01. Reported results are related only to the item tested.
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  - Items tested are as per the standard requirements.

sted by

04. All parameters in this report conforms to the specific standard.

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## TEST REPORT AMBIENT AIR QUALITY

(Hewai Village)

Format No: 7.8F-04

| SECOND FOR                                       | RTNIGHT                                  |
|--|--|
| Unique Lab Report No : LAB-BES/BGR/KRD/23-24/046 | Report Issue Date: 10/05/2023            |
| Job Card No : BES/BGR/KRD/046                    | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/APR/AAQ/15    | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines                     | Product / Material of Test : Ambient Air |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1.00                                     | Gene             | eral Information                | 1 200                                   |
|--|------------------|---------------------------------|---|
| Protocol : Ambient Air                   | A                | Type of Sample: Ambient         | Air                                     |
| Sample Collected By: Nilesh              | Kumar & Team     | Sampling Plan Reference         | : BES-KRD/002A                          |
| Sampling Date : 28/04/2023               | to 29/04/2023    | Sample Receiving & Reg          | istration Date: 29/04/2023              |
| Sample Condition: OK, Preserved & Sealed |                  | Emission Due to: Move<br>Surrou | ment of Vehicles &<br>anding Activities |
| Metrological Information                 | Avg. Temp: 35 °C | Avg. R.Humidity: 49 %           | Barometric Pressure: 705 mmHg           |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C   |  |  |  |  |  |
| Test Start Date: 29/04/2023  | Test End Date : 06/05/2023   |  |  |  |  |
| Sampling Location : Hewai Village - Buffer Zone  | The state of the s |  |  |  |  |
| Predominant Wind Direction: From NNW towards SSE   Customer Representative Name: Mr. Prakash Kuman |  |  |  |  |  |

|          |  |             | Analysis Re                 | sult              |                        |        |
|----------|--|-------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit        | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³       | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.16  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³       | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.50  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | $\mu g/m^3$ | 24 Hours                    | IS 5182 Part 23   | 100                    | 57.21  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³       | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.64  |

----END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.



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TEST REPORT

AMBIENT AIR QUALITY

(BGR Work Shop)

Format No: 7.8F-Q4

| FIRST FORT  | INIGHT                                   |
|---|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/065 | Report Issue Date: 10/06/2023            |
| Job Card No : BES/BGR/KRD/065                     | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/02     | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |

Client Name & Address: - M/s NTPC Ltd.
Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1830 / 1  | Gene            | ral Information  | 17.51                         |  |
|---|-----------------|--|-------------------------------|--|
| Protocol : Ambient Air<br>Sample Collected By : Nilesh Kumar & Team |                 | Type of Sample: Ambient Air Sampling Plan Reference : BES-KRD/003A |                               |  |
|   |                 |  |                               |  |
| Sample Condition: OK, Preserved & Sealed                            |                 | Emission Due to: Movement of Vehicles &<br>Surrounding Activities  |                               |  |
| Metrological Information  | Avg.Temp: 34 °C | R.Humidity: 61%  | Barometric Pressure: 707 mmHg |  |

| Sample De   | escription                                      |  |
|---|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |  |
| Test Start Date: 13/05/2023                       | Test End Date: 23/05/2023                       |  |
| Sampling Location: BGR Work Shop - Core Zone      | Activities and the second second                |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name: Mr. Prakash Kuma  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 10.89  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 25.41  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 73.98  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 32.64  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
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TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

Format No: 7.8F-04

| SECOND FOR  | RTNIGHT                                  |
|---|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/088 | Report Issue Date: 10/06/2023            |
| Job Card No : BES/BGR/KRD/088                     | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/10     | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1434                                     | Gene            | eral Information  | 100                           |  |
|--|-----------------|---|-------------------------------|--|
| Protocol: Ambient Air                    |                 | Type of Sample: Ambient Air                                       |                               |  |
| Sample Collected By : Nilesh             | Kumar & Team    | Sampling Plan Refere  | nce : BES-KRD/004A            |  |
| Sampling Date: 26/05/2023 to 27/05/2023  |                 | Sample Receiving & Registration Date : 29/05/2023                 |                               |  |
| Sample Condition: OK, Preserved & Sealed |                 | Emission Due to: Movement of Vehicles &<br>Surrounding Activities |                               |  |
| Metrological Information                 | Avg.Temp: 33 °C | R.Humidity: 54%   | Barometric Pressure: 706 mmHg |  |

| Sample Description                                |  |  |  |  |
|---|--|--|--|--|
| Sample Temperature at the time of receiving; 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |  |  |
| Test Start Date: 30/05/2023                       | Test End Date: 08/06/2023                        |  |  |  |
| Sampling Location: BGR Work Shop - Core Zone      |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 11.05  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | .80                    | 25,69  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 74.16  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 32.93  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.290L6/20/90/PCi-L of 18th November 2009)
- Declaration: -
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  - 03. Items tested are as per the standard requirements.
    04. All parameters in this report conforms to the specific standard.



(BIOCRAT ENVIRONMENTAL LAB)





TEST REPORT AMBIENT AIR QUALITY

(Hewai Village)

Format No: 7.8F-04

| FIRST FORT  | NIGHT                                    |
|---|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/070 | Report Issue Date: 10/06/2023            |
| Job Card No : BES/BGR/KRD/070                     | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/07     | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |

M/s NTPC Ltd. Client Name & Address: -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gene                                     | ral Information  | 1463  |
|--|--|---|
|  | Type of Sample: Ambi   |   |
| Kumar & Team                             |  |   |
|  | A COLOR OF THE PARTY OF THE PAR | Registration Date: 13/05/2023   |
| Sample Condition: OK, Preserved & Sealed |  | rrounding Activities  |
| Avg.Temp: 35 °C                          | R.Humidity: 59 %   | Barometric Pressure: 705 mmHg   |
|  | Kumar & Team<br>o 12/05/2023   | Kumar & Team Sampling Plan Refere to 12/05/2023 Sample Receiving & Faceved & Sealed Emission Due to: Mo |

| Sample De  | escription                                       |
|--|--|
| Sample Temperature at the time of receiving : 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 13/05/2023                        | Test End Date: 23/05/2023                        |
| Sampling Location: Hewai Village - Buffer Zone     |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.81  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 15,06  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 57.29  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.17  |  |  |

---END OF REPORT---

- Norms: NAAOS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PO-L of 18th November 2009)
- Declaration: -
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  - This report is the property of laboratory & should not be used unless advised.
  - 63. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Hewai Village)

| SECOND FORTNIGHT                                  |  |  |
|---|--|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/093 | Report Issue Date: 10/06/2023            |  |
| Job Card No: BES/BGR/KRD/093                      | Disciptine: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/15     | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |  |
|   |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1800                                     | Gene           | eral Information                                  |   |  |
|--|----------------|---|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By: Nilest              | Kumar & Team   | Sampling Plan Refere                              | nce : BES-KRD/004A                            |  |
| Sampling Date: 27/05/2023 to 28/05/2023  |                | Sample Receiving & Registration Date : 29/05/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |                |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Avg.Temp: 35°C | R.Humidity: 56 %                                  | Barometric Pressure: 707 mmHg                 |  |

| escription   |
|--|
| Temperature at the time of Analysis: 25 ± 2 °C   |
| Test End Date: 08/06/2023  |
| / Commercial Commercia |
| Customer Representative Name : Mr. Prakash Kumar   |
|  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.02  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.31  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 57.68  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.44  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 62. This report is the property of laboratory & should not be used unless advised.
  - 03. Items testpd are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.

SERVICE CONMENTAL SERVICES



#### (BIOCRAT ENVIRONMENTAL LAB)

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TEST REPORT

AMBIENT AIR QUALITY

(Jordag Village)

Format No: 7.8F-04

| FIRST FORT  | NIGHT                                    |
|---|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/069 | Report Issue Date: 10/06/2023            |
| Job Card No : BES/BGR/KRD/069                     | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/06     | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 104                          | Gene            | ral Information      | \ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\     |
|------------------------------|-----------------|----------------------|--|
| Protocol : Ambient Air       |                 | Type of Sample: Ambi | ent Air                                    |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere | nce: BES-KRD/003A                          |
| Sampling Date: 11/05/2023 t  | o 12/05/2023    | Sample Receiving & I | Registration Date: 13/05/2023              |
| Sample Condition: OK, Pre-   | served & Sealed |                      | ovement of Vehicles & rrounding Activities |
| Metrological Information     | Avg.Temp:35°C   | R.Humidity: 59 %     | Barometric Pressure: 705 mmHg              |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 13/05/2023                       | Test End Date: 23/05/2023                        |
| Sampling Location : Jordag Village - Buffer Zone  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.69  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 19.85  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 69.14  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29,53  |  |  |

---END OF REPORT----

- Norms: NAAQ5 (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items rested are as per the standard requirements.

sted by

04. All parameters in this report conforms to the specific standard.

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RANCHI :



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| SECOND FORTNIGHT                                  |  |
|---|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/092 | Report Issue Date: 10/06/2023            |
| Job Card No : BES/BGR/KRD/092                     | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/14     | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambien      |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                             | Gene            | eral Information            | 1001   |  |
|-----------------------------|-----------------|-----------------------------|--|--|
| Protocol : Ambient Air      |                 | Type of Sample: Ambient Air |  |  |
| Sample Collected By: Nilesh | Kumar & Team    | Sampling Plan Refere        | nce : BES-KRD/004A                             |  |
| Sampling Date: 27/05/2023   | to 28/05/2023   | Sample Receiving & I        | Registration Date : 29/05/2023                 |  |
| Sample Condition: OK, Pre   | served & Sealed |                             | overnent of Vehicles &<br>rrounding Activities |  |
| Metrological Information    | Avg.Temp: 35 °C | R.Humidity: 56%             | Barometric Pressure: 707 mmHg                  |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 30/05/2023                       | Test End Date: 08/06/2023                        |
| Sampling Location: Jordag Village - Buffer Zone   |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.98  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>z</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 20.17  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 69.46  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.89  |  |  |

#### ---END OF REPORT---

- NOTIDS: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCS Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.

sted by

04. All parameters in this report conforms to the specific standard.

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Format No: 7.8F-04

#### TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| FIRST FORT  | INIGHT                                   |
|---|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/071 | Report Issue Date: 10/06/2023            |
| Job Card No: BES/BGR/KRD/071                      | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/08     | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |

M/s NTPC Ltd. Client Name & Address: -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 18001 / 1                                 | Gene            | ral Information   | 1761                          |
|---|-----------------|---|-------------------------------|
| Protocol : Ambient Air                    |                 | Type of Sample: Ambi  |                               |
| Sample Collected By : Nilesh Kumar & Team |                 | Sampling Plan Reference : BES-KRD/003A  Sample Receiving & Registration Date : 13/05/2023 |                               |
|   |                 |   |                               |
| Metrological Information                  | Avg.Temp: 35 °C | R.Humidity: 59 %  | Barometric Pressure: 705 mmHg |

| Sample Do  | escription                                       |
|--|--|
| Sample Temperature at the time of receiving : 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date : 13/05/2023                       | Test End Date: 23/05/2023                        |
| Sampling Location: Kerandari Village - Buffer Zone |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | <b>Analysis Re</b>          | sult              | -                      |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 18.14  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 34,93  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 76,35  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.3</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.21  |

#### -END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -

Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

03. Items jested are as per the standard requirements.

ned by

04. All parameters in this report conforms to the specific standard.



(BIOCRAT ENVIRONMENTAL LAB)

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TEST REPORT
AMBIENT AIR QUALITY

Format No: 7,8F-04

(Kerandari Village)

| SECOND FORTNIGHT                                  |  |  |
|---|--|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/094 | Report Issue Date: 10/06/2023            |  |
| Job Card No : BES/BGR/KRD/094                     | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/16     | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |  |

Client Name & Address: - M/s NTPC Ltd.
Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1824                                     | Gene           | eral Information   | 1921   |
|--|----------------|--|--|
| Protocol : Ambient Air                   |                | Type of Sample: Amb  | ient Air                                       |
| Sample Collected By: Nilesh              | Kumar & Team   | Sampling Plan Refere   | nce : BES-KRD/004A                             |
| Sampling Date: 27/05/2023 to 28/05/2023  |                | Sample Receiving & Registration Date : 29/05/2023  |  |
| Sample Condition: OK, Preserved & Scaled |                | A CONTRACTOR OF THE PROPERTY O | overnent of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Avg.Temp: 35°C | R.Humidity: 56%  | Barometric Pressure: 707 mmHg                  |
| E  |                |  |  |

| Sample De  | escription                                       |
|--|--|
| Sample Temperature at the time of receiving: 5 °C  | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 30/05/2023                        | Test End Date: 08/06/2023                        |
| Sampling Location: Kerandari Village - Buffer Zone |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 18.29  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 35.13  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | µg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 76.69  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.54  |  |  |

---END OF REPORT----

- Norses: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPC8 Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 62. This report is the property of laboratory & should not be used unless advised,
  - 03. Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.

PANCH CONMENTAL CONTRACTOR OF THE PANCH CONTRACTOR OF

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Itki Road, Bajra, P.O. - Hehal, Dist. - Ranchi, Jharkhand, Pin.-834005.
Email Id: - biocratenvilogmail.com, Mobile No. - 7369019812, 8340466751, 9608708172.



# BIOCRAT ENVIRONMENTAL SERVICES (BIOCRAT ENVIRONMENTAL LAB)

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TEST REPORT
AMBIENT AIR QUALITY

(Manatu Village)

Format No: 7.8F-04

| FIRST FORT  | INIGHT                                   |
|---|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/068 | Report Issue Date: 10/06/2023            |
| Job Card No : BES/BGR/KRD/068                     | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/05     | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1200 /                                   | Gene           | ral Information  | 1001  |
|--|----------------|--|---|
| Protocol: Ambient Air                    |                | Type of Sample: Ambi   | ient Air                                    |
| Sample Collected By : Nilesh             | Kumar & Team   | Sampling Plan Refere   | nce: BES-KRD/003A                           |
| Sampling Date: 11/05/2023 t              | to 12/05/2023  | Sample Receiving & I   | Registration Date : 13/05/2023              |
| Sample Condition: OK, Preserved & Sealed |                | The state of the s | overnent of Vehicles & rrounding Activities |
| Metrological Information                 | Avg.Temp: 35°C | R.Humidity: 59 %   | Barometric Pressure: 705 mmHg               |

| Sample De   | escription                                       |
|---|--|
| Sample Temperature at the time of receiving; 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 13/05/2023                       | Test End Date: 23/05/2023                        |
| Sampling Location: Manatu village - Buffer Zone   |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kuman |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.18   |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.89  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 67.92  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.46  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tasted are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FORTNIGHT                                  |  |  |
|---|--|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/091 | Report Issue Date: 10/06/2023            |  |
| Job Card No : BES/BGR/KRD/091                     | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/13     | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |  |
|   |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1600                                     | Gene            | eral Information   | 1.4.4   |
|--|-----------------|--|---|
| Protocol : Ambient Air                   |                 | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By : Nilesh             | Kumar & Team    | Sampling Plan Refere   | nce: BES-KRD/004A                             |
| Sampling Date: 27/05/2023 to 28/05/2023  |                 | Sample Receiving & I   | Registration Date : 29/05/2023                |
| Sample Condition: OK, Preserved & Sealed |                 | The state of the s | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Avg.Temp: 35 °C | R.Humidity: 56%  | Barometric Pressure: 707 mmHg                 |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/05/2023  | Test End Date: 08/06/2023  |  |  |  |  |
| Sampling Location : Manatu village - Buffer Zone   | A STATE OF THE PARTY OF THE PAR |  |  |  |  |
| Predominant Wind Direction: From NNW towards SSE   | Customer Representative Name : Mr. Prakash Kumar   |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.51   |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 16,15  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | 15 5182 Part 23   | 100                    | 68.23  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 28,79  |  |  |

#### ---END OF REPORT----

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 61. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.

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(BIOCRAT ENVIRONMENTAL LAB)

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Format No. 7,85-04

Certified by: ISO 9001;2015(QMS) & ISO 45001;2018(OHSAS)

### TEST REPORT AMBIENT AIR QUALITY

(SISF Camp)

| FIRST FORT  | NIGHT                                    |  |
|---|--|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/066 | Report Issue Date: 10/06/2023            |  |
| Job Card No : BES/BGR/KRD/066                     | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/03     | Group : Atmospheric Pollution            |  |
| Type of Industry : Coal Mines                     | Product / Material of Test : Ambient Air |  |

M/s NTPC Ltd. Client Name & Address: -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gene                                       | ral Information  |   |  |
|--|--|---|--|
| Destruct's Ambient Air                     |  | ent Air   |  |
| Protocol : Amorea Para Nilarh Kumar & Team |  | nce : BES-KRD/003A                                |  |
| Sample Collected by . It is a              |  | Sample Receiving & Registration Date : 13/05/2023 |  |
| Sampling Date: 10/05/2023 to 11/05/2023    |  | ovement of Vehicles &                             |  |
| Sample Condition: OK, Preserved & Sealed   |  | rrounding Activities                              |  |
| Ave Temp: 34 °C                            | The second secon | Barometric Pressure: 707 mmHg                     |  |
|  | Kumar & Team<br>o 11/05/2023<br>served & Sealed  | 0 11/05/2023 Sample Receiving & F                 |  |

| Sample De  | escription                                       |  |
|--|--|--|
| Sample Temperature at the time of receiving : 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
|  | Test End Date: 23/05/2023                        |  |
| Test Start Date: 13/03/2023                        | 1.51   |  |
| Sampling Location: SISF CAMP - Core Zone           | A St. Ma Beelvach Vuma                           |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kuman |  |

|          |  |       | <b>Analysis Re</b>          | sult              |                        |            |
|----------|--|-------|-----------------------------|-------------------|------------------------|------------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result     |
|          |  | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 14.97      |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | -     |                             | IS 5182 Part-06   | 80                     | 28,42      |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | 12 2105 Lait-00   |                        | 1 11570412 |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 65.36      |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.19      |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 61. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless ads
  - 63. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard





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TEST REPORT AMBIENT AIR QUALITY

Format No: 7.8F-04

(SISF Camp)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/089 | Report Issue Date: 10/06/2023            |
| Job Card No : BES/BGR/KRD/089                     | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/11     | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| (10m) /                      | Gene            | eral Information   | 1721  |
|------------------------------|-----------------|--|---|
| Protocol : Ambient Air       |                 | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere   | nce: BES-KRD/004A                             |
| Sampling Date: 26/05/2023 t  | io 27/05/2023   | Sample Receiving & I   | Registration Date : 29/05/2023                |
| Sample Condition: OK, Pre-   | served & Sealed | A STATE OF THE PARTY OF THE PAR | ovement of Vehicles &<br>prounding Activities |
| Metrological Information     | Avg.Temp: 33 °C | R.Humidity: 54%  | Barometric Pressure; 706 mmHg                 |

| Sample De   | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 30/05/2023                       | Test End Date: 08/06/2023                        |
| Sampling Location: SISF CAMP - Core Zone          |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 15.14  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 28.71  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 65.89  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.64  |

---END OF REPORT---

- Norms: NAACIS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - Reported results are related only to the item tested.
  - This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - All payameters in this report conforms to the specific standard.





### **BIOCRAT ENVIRONMENTAL SERVICES** (BIOCRAT ENVIRONMENTAL LAB)

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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(QHSAS)

#### TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

Format No: 7.8F-04

| FIRST FORTNIGHT                                   |  |  |  |
|---|--|--|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/067 | Report Issue Date: 10/06/2023            |  |  |
| Job Card No : BES/BGR/KRD/067                     | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/04     | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |  |  |

M/s NTPC Ltd. Client Name & Address: -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /AD-1/                                    | Gene            | eral Information   | 1.50  |  |
|---|-----------------|--|---|--|
| Protocol : Ambient Air                    |                 | Type of Sample: Ambient Air  |   |  |
| Sample Collected By : Nilcsh              | Kumar & Team    | Sampling Plan Refere   | nce : BES-KRD/003A                            |  |
| Sampling Date: 10/05/2023                 | to 11/05/2023   | Sample Receiving & I   | Registration Date: 13/05/2023                 |  |
| Sample Condition : OK, Preserved & Scaled |                 | The state of the s | ovement of Vehicles &<br>prounding Activities |  |
| Metrological Information                  | Avg.Temp: 34 °C | R.Humidity: 61%  | Barometric Pressure: 707 mmHg                 |  |

| Sample De   | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 13/05/2023                       | Test End Date: 23/05/2023                        |
| Sampling Location: Tarbesa Village - Core Zone    |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumar |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.63   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.57  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 70.45  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 36.14  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

SECOND FORTNIGHT Unique Lab Report No : LAB- BES/BGR/KRD/23-24/090 Report Issue Date: 10/06/2023 Job Card No: BES/BGR/KRD/090 Discipline: Chemical Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/12 Group: Atmospheric Pollution Type of Industry: Coal Mines Product / Material of Test : Ambient Air

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                              | Gene            | eral Information                          |   |  |
|------------------------------|-----------------|---|---|--|
| Protocol : Ambient Air       |                 | Type of Sample: Ambient Air               |   |  |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere                      | nce : BES-KRD/004A                            |  |
| Sampling Date: 26/05/2023    | to 27/05/2023   | Sample Receiving & I                      | Registration Date : 29/05/2023                |  |
| Sample Condition: OK, Pre    | served & Sealed | V37-34-0000000000000000000000000000000000 | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information     | Avg.Temp: 33 °C | R.Humidity: 54%                           | Barometric Pressure: 706 mmHg                 |  |

| Sample De   | escription                                      |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C  |
| Test Start Date: 30/05/2023                       | Test End Date: 08/06/2023                       |
| Sampling Location: Tarhesa Village - Core Zone    |   |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name: Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.95   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.86  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 70.73  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 36.58  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - All payameters in this report conforms to the specific standard 04.





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TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

Format No: 7.8F-04

| FIRST FORT  | INIGHT                                   |
|---|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/064 | Report Issue Date: 10/06/2023            |
| Job Card No : BES/BGR/KRD/064                     | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/01     | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |

M/s NTPC Ltd. Client Name & Address : -Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| J.Fa.F.                                  | Gene           | ral Information   |                               |  |
|--|----------------|---|-------------------------------|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air                                       |                               |  |
| Sample Collected By : Nilesh             | Kumar & Team   | Sampling Plan Reference : BES-KRD/003A                            |                               |  |
| Sample Condition: OK, Preserved & Scaled |                | Sample Receiving & Registration Date : 13/05/2023                 |                               |  |
|  |                | Emission Due to: Movement of Vehicles &<br>Surrounding Activities |                               |  |
| Metrological Information                 | Avg.Temp: 34°C | R.Humidity: 61 %  | Barometric Pressure: 707 mmHg |  |

| Sample Do  | escription                                      |  |
|--|---|--|
| Sample Temperature at the time of receiving : 5 °C       | Temperature at the time of Analysis : 25 ± 2 °C |  |
| Test Start Date: 13/05/2023                              | Test End Date: 23/05/2023                       |  |
| Sampling Location : Baseria Village (NTPC Camp) - Core 2 | Zone  |  |
| Predominant Wind Direction: From WNW towards ESE         |   |  |

|          |  | 1                 | <b>Analysis Re</b>          | sult              | 5                      |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
|          | E L. L Diavida (SO.)   | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 8,23   |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | 100,000,000       | 24 Hours                    | IS 5182 Part-06   | 80                     | 20.67  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> |                             | IS SAULT HIS ST   |                        |        |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | $\mu g/m^3$       | 24 Hours                    | IS 5182 Part 23   | 100                    | 52.33  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 24.97  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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Tested by

04. All parameters in this report conforms to the specific standard.



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TEST REPORT AMBIENT AIR QUALITY

Format No: 7,8F-04

(Baseria Village)

| SECOND FORTNIGHT                                  |  |  |  |  |  |
|---|--|--|--|--|--|
| Unique Lab Report No : LAB- BES/BGR/KRD/23-24/087 | Report Issue Date: 10/06/2023            |  |  |  |  |
| Job Card No : BES/BGR/KRD/087                     | Discipline : Chemical                    |  |  |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAY/AAQ/09     | Group : Atmospheric Pollution            |  |  |  |  |
| Type of Industry: Coal Mines                      | Product / Material of Test : Ambient Air |  |  |  |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1000                                     | Gene            | eral Information            | 1 50   |  |
|--|-----------------|-----------------------------|--|--|
| Protocol: Ambient Air                    |                 | Type of Sample: Ambient Air |  |  |
| Sample Collected By : Nilesh             | Kumar & Team    | Sampling Plan Refere        | nce : BES-KRD/004A                             |  |
| Sampling Date: 26/05/2023 t              | o 27/05/2023    | Sample Receiving & I        | Registration Date : 29/05/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |                 |                             | overnent of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Avg.Temp: 33 °C | R.Humidity: 54 %            | Barometric Pressure: 706mmHg                   |  |

| Sample De   | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 30/05/2023                           | Test End Date : 08/06/2023                       |
| Sampling Location: Baseria Village (NTPC Camp) - Core | Zone   |
| Predominant Wind Direction: From WNW towards ESE      | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                   |                        |        |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.45  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 20.97  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 52.61  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.13  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - All parameters in this report conforms to the specific standard. 04.





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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| SECOND FORTNIGHT   |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC812023000000011F                             | Report Issue Date: 26/07/2023            |  |  |
| Job Card No: BGR/KRD/0000011   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AAQ/01                        | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /35/                                     | Ge           | neral Information    |   |
|--|--------------|----------------------|---|
| Protocol: Ambient Air                    |              | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By: Nilesl              | Kumar & Team | Sampling Plan Refere | nce: BES/SAMPLING/PLAN/AAQ/ 01                |
| Sampling Date : 26/06/2023               | o 27/06/2023 | Sample Receiving & I | Registration Date: 28/06/2023                 |
| Sample Condition: OK, Preserved & Sealed |              |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 28 °C  | R.Humidity: 67 %     | Barometric Pressure: 705 mmHg                 |

| Sample D  | escription                                      |
|---|---|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date: 28/06/2023                           | Test End Date: 07/07/2023                       |
| Sampling Location: Baseria Village (NTPC Camp) - Core | Zone  |
| Predominant Wind Direction: From SSW towards NNE      | Customer Representative Name: Mr. Prakash Kumar |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>1</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 8.53   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 21.76  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | $\mu g/m^3$       | 24 Hours                    | IS 5182 Part 23   | 100                    | 53.31  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.64  |

-END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - 04. All parameters in this report conforms to the specific standard.





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# TEST REPORT AMBIENT AIR QUALITY

(BGR Camp)

Format No : 7.8F-04

| SECOND FORTNIGHT   |  |  |  |  |
|--|--|--|--|--|
| Unique Lab Report No: TC812023000000012F                             | Report Issue Date: 26/07/2023            |  |  |  |
| Job Card No : BGR/KRD/0000012  | Discipline: Chemical                     |  |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AAQ/02                        | Group : Atmospheric Pollution            |  |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 135/                                     | Ge          | neral Information                                  |  |  |
|--|-------------|--|--|--|
| Protocol: Ambient Air                    |             | Type of Sample: Amb                                | ient Air                                     |  |
| Sample Collected By: Nilesh Kumar & Team |             | Sampling Plan Reference : BES/SAMPLING/PLAN/AAQ/ ( |  |  |
| Sampling Date: 26/06/2023 to 27/06/2023  |             | Sample Receiving & Registration Date: 28/06/2023   |  |  |
| Sample Condition: OK, Preserved & Sealed |             | Emission Due to: Mo                                | vement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 28 °C | R.Humidity: 67 %                                   | Barometric Pressure: 705 mmHg                |  |
|  |             |  |  |  |

| Sample D  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                        |
| Sampling Location : BGR Camp - Core Zone          |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 11.61  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 26.47  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 75.08  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 33.59  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration : -
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Registered by Jharkhand State Pollution Control Board (JSPCB)
Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)



Format No: 7,8F-04

# TEST REPORT AMBIENT AIR QUALITY

(SISF Camp)

| SECOND FORTNIGHT   |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC812023000000013F Report Issue Date: 26/07/2023 |  |  |  |
| Job Card No : BGR/KRD/0000013  | Discipline : Chemical                    |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AAQ/03                          | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24  | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| / 1                                      | Ge            | neral Information   |                                |
|--|---------------|---|--------------------------------|
| Protocol : Ambient Air                   | FEE A         | Type of Sample: Amb   | lent Air                       |
| Sample Collected By : Nilesh             | Kumar & Team  | Sampling Plan Refere  | nce: BES/SAMPLING/PLAN/AAQ/ 01 |
| Sampling Date: 26/06/2023                | to 27/06/2023 | Sample Receiving &  | Registration Date : 28/06/2023 |
| Sample Condition: OK, Preserved & Sealed |               | Emission Due to: Movement of Vehicles &<br>Surrounding Activities |                                |
| Metrological Information                 | Temp: 28 °C   | R.Humidity: 67 %  | Barometric Pressure: 705 mmHg  |

| Sample D  | Description                                     |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                       |
| Sampling Location: SISF Camp - Core Zone          |   |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name: Mr. Prakash Kumar |

|          |  |             | Analysis Re                 | sult              |                        |        |
|----------|--|-------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit        | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³       | 24 Hours                    | IS 5182 Part-02   | 80                     | 15.61  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³       | 24 Hours                    | IS 5182 Part-06   | 80                     | 29.46  |
| 0.3      | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | $\mu g/m^3$ | 24 Hours                    | IS 5182 Part 23   | 100                    | 66.77  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³       | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.69  |

-END OF REPORT-

 Nerms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-I, of 18th November 2009)

Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

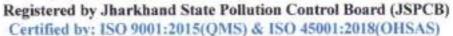
03. Items tested are as per the standard requirements.

04. All payameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)





Format No: 7.8F-04

TEST REPORT

AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FORTNIGHT   |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC812023000000014F Report Issue Date: 26/07/2023 |  |  |  |
| Job Card No : BGR/KRD/0000014  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AAQ/04                          | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24  | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1.36                                     | Ge            | neral Information   |                                |
|--|---------------|---|--------------------------------|
| Protocol : Ambient Air                   |               | Type of Sample: Amb   | ient Air                       |
| Sample Collected By : Nilesh             | Kumar & Team  | Sampling Plan Refere  | nce: BES/SAMPLING/PLAN/AAQ/ 01 |
| Sampling Date: 26/06/2023                | to 27/06/2023 | Sample Receiving & l  | Registration Date: 28/06/2023  |
| Sample Condition: OK, Preserved & Sealed |               | Emission Due to: Movement of Vehicles &<br>Surrounding Activities |                                |
| Metrological Information                 | Temp: 28 °C   | R.Humidity: 67 %  | Barometric Pressure: 705 mmHg  |

| Sample I  | Description                                     |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                       |
| Sampling Location: Tarbesa Village - Core Zone    | /   |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name: Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 7.34   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 17.59  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 71.57  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 37.49  |

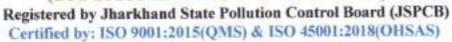
---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration : -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All payameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)





Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FOR   | TNIGHT                                   |  |  |
|--|--|--|--|
| Unique Lab Report No: TC812023000000015F Report Issue Date: 26/07/2023 |  |  |  |
| Job Card No : BGR/KRD/0000015  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AAQ/05                          | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24   | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 135                          | Ge              | neral Information    |   |
|------------------------------|-----------------|----------------------|---|
| Protocol: Ambient Air        |                 | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere | nce: BES/SAMPLING/PLAN/AAQ/ 01                |
| Sampling Date: 27/06/2023    | o 28/06/2023    | Sample Receiving & l | Registration Date : 28/06/2023                |
| Sample Condition: OK, Pre-   | served & Sealed | Emission Due to: Mo  | vement of Vehicles &<br>irrounding Activities |
| Metrological Information     | Temp: 26 °C     | R.Humidity: 73 %     | Barometric Pressure: 705 mmHg                 |

| Sample D  | Description                                     |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C  |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                       |
| Sampling Location : Manatu Village - Buffer Zone  |   |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name: Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        | A CONTRACTOR OF THE PARTY OF TH |
|----------|--|-------|-----------------------------|-------------------|------------------------|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result   |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 7.03   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.48  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 68,71  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.53  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

- 01. Reported results are related only to the item tested.
- 02. This report is the property of laboratory & should not be used unless advised.
- 03. Items tested are as per the standard requirements.
- 04. All paragreters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)





Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| SECOND FOR   | TNIGHT                                   |  |  |
|--|--|--|--|
| Unique Lab Report No: TC812023000000016F Report Issue Date: 26/07/2023 |  |  |  |
| Job Card No : BGR/KRD/0000016  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AAQ/06                          | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24   | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1.500 /                      | Ge   | neral Information    | 100   |
|------------------------------|--|----------------------|---|
| Protocol : Ambient Air       |  | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Nilesh | Kumar & Team   | Sampling Plan Refere | nce: BES/SAMPLING/PLAN/AAQ/ 01                |
| Sampling Date: 27/06/2023 t  | Control of the Contro | Sample Receiving & I | Registration Date: 28/06/2023                 |
| Sample Condition: OK, Pre-   | A STATE OF THE PARTY OF THE PAR | Emission Due to: Mo  | vement of Vehicles &<br>irrounding Activities |
| Metrological Information     | Temp: 26 °C  | R.Humidity: 73 %     | Barometric Pressure: 705 mmHg                 |

| Sample D  | Description  |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023  |
| Sampling Location : Jordag Village - Buffer Zone  | Acceptable to the second of th |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name: Mr. Prakash Kumar  |

|          |  |       | <b>Analysis Re</b>          | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 8.35   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 20.61  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 70.89  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 30.76  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

· Declaration : -

01. Reported results are related only to the item tested.

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63. Items jested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





### (BIOCRAT ENVIRONMENTAL LAB)

Registered by Jharkhand State Pollution Control Board (JSPCB)

Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)



Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Hewai Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC812023000000017F                              | Report Issue Date: 26/07/2023            |
| Job Card No : BGR/KRD/0000017   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AAQ/07                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1 500   | Ge          | neral Information  |                               |  |
|---|-------------|--|-------------------------------|--|
| Protocol : Ambient Air  |             | Type of Sample: Amb  | ent Air                       |  |
| Sample Collected By : Nilesh Kumar & Team<br>Sampling Date : 27/06/2023 to 28/06/2023 |             | Sampling Plan Reference : BES/SAMPLING/PLAN/AAQ/ 0 Sample Receiving & Registration Date : 28/06/2023 |                               |  |
|   |             |  |                               |  |
| Metrological Information  | Temp: 26 °C | R.Humidity: 73 %   | Barometric Pressure: 705 mmHg |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 28/06/2023                       | Test End Date: 07/07/2023                        |
| Sampling Location : Hewai Village - Buffer Zone   |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name ; Mr. Prakash Kumar |

|          |  |       | <b>Analysis Re</b>          | sult              | - 1                    |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.29   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.83  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 58.39  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.18  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

· Declaration : -

61. Reported results are related only to the item tested.

This report is the property of laboratory & should not be used unless advised.

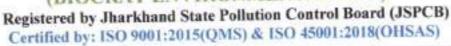
03. Items tested are as per the standard requirements.

04. All payameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)





TEST REPORT

AMBIENT AIR QUALITY

Format No : 7:8F-04

(Kerandari Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC812023000000018F                              | Report Issue Date: 26/07/2023            |
| Job Card No : BGR/KRD/0000018   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JUN/AAQ/08                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information                                 |   |
|--|--------------|---|---|
| Protocol : Ambient Air                   |              | Type of Sample: Amb                               |   |
| Sample Collected By : Nilesh             | Kumar & Team |   | nce: BES/SAMPLING/PLAN/AAQ/ 01                |
| Sampling Date: 27/06/2023 to 28/06/2023  |              | Sample Receiving & Registration Date : 28/06/2023 |   |
| Sample Condition: OK, Preserved & Sealed |              | Emission Due to: Mo                               | vement of Vehicles &<br>arrounding Activities |
| Metrological Information                 | Temp: 26 °C  | R.Humidity: 73 %                                  | Barometric Pressure: 705 mmHg                 |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C   | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 28/06/2023                         | Test End Date: 07/07/2023                        |
| Sampling Location : Kerandari Village - Buffer Zone |  |
| Predominant Wind Direction: From SSW towards NNE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | <b>Analysis Re</b>          | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 18.76  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 35.43  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 77.54  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 32.15  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCFL of 18th November 2009)
- Declaration : -
  - 01. Reported results are related only to the item tested.
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  - 03. Items tested are us per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





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Format No : 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| FIRST FORT  | NIGHT                                    |
|---|--|
| Unique Lab Report No: TC1203923000000063F                             | Report Issue Date: 05/08/2023            |
| Job Card No ; BES/0000063   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/05                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1667  | Ge          | neral Information                                |                               |
|---|-------------|--|-------------------------------|
| Protocol : Ambient Air<br>Sample Collected By : Nilesh Kumar & Team |             | Type of Sample: Ambient Air                      |                               |
|   |             | Sampling Plan Reference : BES/0003               |                               |
| Sampling Date: 11/07/2023 to 12/07/2023                             |             | Sample Receiving & Registration Date: 14/07/2023 |                               |
| Sample Condition: OK, Preserved & Sealed                            |             | Emission Due to: Mo                              | rrounding Activities          |
| Metrological Information  | Temp: 26 °C | R.Humidity: 72 %                                 | Barometric Pressure: 706 mmHg |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 14/07/2023                       | Test End Date: 27/07/2023                        |
| Sampling Location: Manatu Village - Buffer Zone   |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumai |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.59   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 10.4   |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 47.38  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 20.11  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8-29016/20/90/PCHL of 18th November 2009)
- Declaration : -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised.

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Pritanakur r Tested by



Authorized Signatory Technical Manager

Page 1 of 1



#### (BIOCRAT ENVIRONMENTAL LAB)

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Certified by: ISO 9001:2015(OMS) & ISO 45001:2018(OHSAS)





Format No: 7.8F-04

#### TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FORTNIGHT   |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC1203923000000091F  | Report Issue Date: 05/08/2023            |  |  |
| Job Card No : BES/000091   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/13  | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24   | Work Order Date : 24/06/2023             |  |  |
| The second secon |  |  |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information                                 |   |
|--|--------------|---|---|
| Protocol: Ambient Air                    |              | Type of Sample: Amb                               | ient Air                                      |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere                              | ence : BES/0005                               |
| Sampling Date: 28/07/2023 to 29/07/2023  |              | Sample Receiving & Registration Date : 29/07/2023 |   |
| Sample Condition: OK, Preserved & Sealed |              |   | vement of Vehicles &<br>urrounding Activities |
| Metrological Information                 | Temp: 27 °C  | R.Humidity: 64 %                                  | Barometric Pressure: 706 mmHg                 |

| Sample Description                              |  |  |  |  |
|---|--|--|--|--|
| Temperature at the time of Analysis: 25 ± 2 °C  |  |  |  |  |
| Test End Date: 04/08/2023                       |  |  |  |  |
|   |  |  |  |  |
| Customer Representative Name: Mr. Prakash Kumar |  |  |  |  |
|   |  |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.56   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 8.62   |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 42.02  |
| 04       | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 16.13  |

---END OF REPORT----

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

- Reported results are related only to the item tested.
- 02. This report is the property of laboratory & should not be used unless advised.
- Items tested are as per the standard requirements.
- All parameters in this report conforms to the specific standard.







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Format No : 7,85-04

# TEST REPORT AMBIENT AIR QUALITY

(Pagar Village)

| FIRST FORT  | NIGHT                                    |
|---|--|
| Unique Lab Report No: TC1203923000000065F                             | Report Issue Date: 05/08/2023            |
| Job Card No : BES/0000065   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/07                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|   | Ge | neral Information  |             |                  |
|---|----|--|-------------|------------------|
| Protocol: Ambient Air Sample Collected By: Nilesh Kumar & Team Sampling Date: 11/07/2023 to 12/07/2023 Sample Condition: OK, Preserved & Sealed |    | Type of Sample: Ambient Air  |             |                  |
|   |    | Sampling Plan Reference : BES/0003 Sample Receiving & Registration Date : 14/07/2023 |             |                  |
|   |    |  |             |                  |
|   |    | Metrological Information   | Temp: 26 °C | R.Humidity: 72 % |

| Sample D  | escription                                       |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 14/07/2023                       | Test End Date: 27/07/2023                        |  |
| Sampling Location: Pagar Village - Buffer Zone    |  |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | < 5.0  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 11.42  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 47.85  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 20.84  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCFL of 18th November 2009)
- Declaration : -

Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Pagar Village)

| SECOND FORTNIGHT   |  |  |  |  |
|--|--|--|--|--|
| Unique Lab Report No: TC1203923000000093F                            | Report Issue Date: 05/08/2023            |  |  |  |
| Job Card No : BES/0000093  | Discipline: Chemical                     |  |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/15                        | Group : Atmospheric Pollution            |  |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 10.97   | Ge | neral Information  |  |  |   |            |
|---|----|--|--|--|---|------------|
| Protocol: Ambient Air Sample Collected By: Nilesh Kumar & Team Sampling Date: 28/07/2023 to 29/07/2023 Sample Condition: OK, Preserved & Sealed |    | Type of Sample: Ambient Air Sampling Plan Reference : BES/0005 Sample Receiving & Registration Date : 29/07/2023 |  |  |   |            |
|   |    |  |  |  | Emission Due to: Movement of Vehicles &<br>Surrounding Activities |            |
|   |    |  |  |  | Metrological Information  | Temp: 27°C |

| Sample D   | Description                                      |  |  |
|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |
| Test Start Date: 29/07/2023  | Test End Date: 04/08/2023                        |  |  |
| Sampling Location: Pagar Village - Buffer Zone   |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          |  |       | <b>Analysis Re</b>          | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | < 5.0  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 8.36   |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 41.07  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 13.99  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration : -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.







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Format No : 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| FIRST FORTNIGHT  |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC1203923000000064F                            | Report Issue Date: 05/08/2023            |  |  |
| Job Card No : BES/0000064  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/06                        | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 74.37   | Ge           | neral Information   |                               |  |
|---|--------------|---|-------------------------------|--|
| Protocol: Ambient Air   |              | Type of Sample: Ambient Air                                       |                               |  |
| Sample Collected By : Nilesh  | Kumar & Team | Sampling Plan Refere  | ence : BES/0003               |  |
| Sampling Date: 11/07/2023 to 12/07/2023<br>Sample Condition: OK, Preserved & Sealed |              | Sample Receiving & Registration Date: 14/07/2023                  |                               |  |
|   |              | Emission Due to: Movement of Vehicles &<br>Surrounding Activities |                               |  |
| Metrological Information  | Temp: 26 °C  | R.Humidity: 72 %  | Barometric Pressure: 706 mmHg |  |

| Sample D   | Description                                      |  |  |
|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |
| Test Start Date: 14/07/2023  | Test End Date: 27/07/2023                        |  |  |
| Sampling Location: Pahra Village - Buffer Zone   |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.0    |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 9.21   |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 43.04  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part 24   | 60                     | 18.10  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

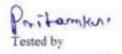
#### Declaration : -

61. Reported results are related only to the item tested.

62. This report is the property of laboratory & should not be used unless advised.

(3. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.









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Format No : 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| SECOND FOR   | TNIGHT                                   |
|--|--|
| Unique Lab Report No : TC1203923000000092F                           | Report Issue Date: 05/08/2023            |
| Job Card No : BES/0000092  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/14                        | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/05/2023              |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                              | Ge              | neral Information   |  |
|------------------------------|-----------------|---|--|
| Protocol: Ambient Air        |                 | Type of Sample: Amb   | ient Air                                     |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere  | nee : BES/0005                               |
| Sampling Date: 28/07/2023 t  | o 29/07/2023    | Sample Receiving &  | Registration Date: 29/07/2023                |
| Sample Condition: OK, Pre-   | served & Sealed | 1 4 4 1 0 1 0 1 1 4 9 0 1 1 0 1 1 1 0 0 1 1 1 1 0 0 1 1 1 1 | vement of Vehicles &<br>prounding Activities |
| Metrological Information     | Temp: 27 °C     | R.Humidity: 64 %  | Barometric Pressure: 706 mmHg                |

| Sample D  | escription                                      |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date: 29/07/2023                       | Test End Date: 04/08/2023                       |
| Sampling Location: Pahra Village - Buffer Zone    |   |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name: Mr. Prakash Kumar |

|          |  |       | <b>Analysis Re</b>          | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 5.92   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 7.19   |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 45.88  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.53  |

---END OF REPORT---

- NOTES: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration : -
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  - Di. All parameters in this report conforms to the specific standard.









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Format No : 7:8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000062F Report Issue Date: 05/08/20 |  |  |
| Job Card No : BES/0000062   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/04                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                              | Ge   | neral Information  |  |
|------------------------------|--|--|--|
| Protocol : Ambient Air       |  | Type of Sample: Amb  | ient Air   |
| Sample Collected By : Nilesh | Kumar & Team   | Sampling Plan Refere   | nce : BES/0003   |
| Sampling Date: 10/07/2023    | to 11/07/2023  | Sample Receiving & I   | Registration Date: 14/07/2023  |
| Sample Condition: OK, Pre    | served & Sealed  | Emission Due to: Mo  | vement of Vehicles &<br>rrounding Activities   |
| Metrological Information     | Temp: 27 °C  | R.Humidity: 69 %   | Barometric Pressure: 706 mmHg  |
|                              | The second secon | The state of the s | A CONTRACTOR OF THE PROPERTY O |

| Sample Description                                |   |  |
|---|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C  |  |
| Test Start Date: 14/07/2023                       | Test End Date: 27/07/2023                       |  |
| Sampling Location: Tarbesa Village - Core Zone    |   |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name: Mr. Prakash Kumar |  |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 7.0    |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.42  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 64.1   |
| 04       | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.76  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FO  | PRTNIGHT                                 |
|--|--|
| Unique Lab Report No : TC12039230000000090F                          | Report Issue Date: 05/08/2023            |
| Job Card No : BES/0000090  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/12                        | Group ; Atmospheric Pollution            |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.
Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 18.91  | Ge   | neral Information  |  |
|--|--|--|--|
| Protocol: Ambient Air  |  | Type of Sample: Amb  | ent Air                                      |
| Sample Collected By : Nilesh   | Kumar & Team   | Sampling Plan Refere   | nce: BES/SAMPLING/PLAN/AAQ/ 0                |
| Sampling Date: 27/07/2023  | to 28/07/2023  | Sample Receiving & I   | Registration Date : 29/07/2023               |
| Sample Condition: OK, Preserved & Scaled   |  | Emission Due to: Mo  | vement of Vehicles &<br>rrounding Activities |
| Metrological Information   | Temp: 26 °C  | R.Humidity: 70 %   | Barometric Pressure: 706 mmHg                |
| The Company of the Co | STATE OF THE PARTY | The second secon |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 29/07/2023                       | Test End Date: 04/08/2023                        |
| Sampling Location: Tarbesa Village - Core Zone    |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.93   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 13.36  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 59.63  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.81  |

---END OF REPORT----

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - 03. Items tested are as per the standard requirements.
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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| FIRST FORT  | NIGHT                                    |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000000059F Report Issue Date: 05/08/2023 |  |  |  |
| Job Card No : BES/0000059   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/01                           | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24    | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge | neral Information  |  |  |  |             |                  |   |
|--|----|--|--|--|--|-------------|------------------|---|
| Protocol: Ambient Air Sample Collected By: Nilesh Kumar & Team Sampling Date: 10/07/2023 to 11/07/2023 |    | Type of Sample: Ambient Air Sampling Plan Reference: BES/0003 Sample Receiving & Registration Date: 14/07/2023 |  |  |  |             |                  |   |
|  |    |  |  |  | Sample Condition: OK, Preserved & Sealed |             |                  | ovement of Vehicles &<br>rrounding Activities |
|  |    |  |  |  | Metrological Information                 | Temp: 27 °C | R.Humidity: 69 % | Barometric Pressure: 706 mmHg                 |

| escription   |  |  |  |
|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |
| Test End Date: 27/07/2023  |  |  |  |
| Zone   |  |  |  |
| Customer Representative Name : Mr. Prakash Kumar   |  |  |  |
|  |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 7.92   |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 19.24  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part 23   | 100                    | 50.34  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 22.88  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 82. This report is the property of laboratory & should not be used unless advised.
  - 93. Items tested are as per the standard requirements.
  - All parameters in this report conforms to the specific standard.







(BIOCRAT ENVIRONMENTAL LAB)







Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| SECOND FORTNIGHT  |  |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000000087F                             | Report Issue Date: 05/08/2023            |  |  |
| Job Card No : BES/0000087   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/09                         | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 760.97   | Ge          | neral Information   |                               |  |
|--|-------------|---|-------------------------------|--|
| Protocol: Ambient Air  Sample Collected By: Nilesh Kumar & Team  Sampling Date: 27/07/2023 to 28/07/2023 |             | Type of Sample: Ambient Air   |                               |  |
|  |             | Sampling Plan Reference : BES/0005<br>Sample Receiving & Registration Date : 29/07/2023 |                               |  |
|  |             |   |                               | Sample Condition: OK, Preserved & Sealed |
| Metrological Information   | Temp: 26 °C | R.Humidity: 70 %  | Barometric Pressure: 706 mmHg |  |

| Sample D   | escription                                       |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 29/07/2023  | Test End Date: 04/08/2023                        |  |  |  |
| Sampling Location ; Baseria Village (NTPC Camp) - Core   | Zone   |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 7.93   |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.91  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 47.35  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.76  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

- 01. Reported results are related only to the item tested.
- This report is the property of laboratory & should not be used unless advised.
- 63. Items tested are as per the standard requirements.
- 4. All parameters in this report conforms to the specific standard.







#### (BIOCRAT ENVIRONMENTAL LAB)

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Format No : 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| FIRST FORTNIGHT  |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC1203923000000061F                            | Report Issue Date: 05/08/2023            |  |  |
| Job Card No : BES/0000061  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/03                        | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7897 1   | Ge          | neral Information   |                               |  |
|--|-------------|---|-------------------------------|--|
| Protocol: Ambient Air Sample Collected By: Nilesh Kumar & Team Sampling Date: 10/07/2023 to 11/07/2023 |             | Type of Sample: Amb   | ent Air                       |  |
|  |             | Sampling Plan Reference : BES/0003<br>Sample Receiving & Registration Date : 14/07/2023 |                               |  |
|  |             |   |                               |  |
| Metrological Information   | Temp: 27 °C | R.Humidity: 69 %  | Barometric Pressure: 706 mmHg |  |

| Sample Description   |   |  |  |  |
|--|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |  |
| Test Start Date: 14/07/2023  | Test End Date: 27/07/2023                       |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |   |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name: Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 5.91   |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 12.56  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 59.97  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 24.97  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration : -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised,
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.







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Jharkhand State Pollution Control Board (JSPCB)
Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(QHSAS)





Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| SECOND FO  | DRTNIGHT                                 |
|--|--|
| Unique Lab Report No: TC1203923000000089F                            | Report Issue Date: 05/08/2023            |
| Job Card No : BES/0000089  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/11                        | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 18.97                                    | Ge          | neral Information                                |  |  |
|--|-------------|--|--|--|
| Protocol: Ambient Air                    |             | Type of Sample: Ambient Air                      |  |  |
| Sample Collected By: Nilesh Kumar & Team |             | Sampling Plan Reference : BES/0005               |  |  |
| Sampling Date: 27/07/2023 to 28/07/2023  |             | Sample Receiving & Registration Date: 29/07/2023 |  |  |
| Sample Condition: OK, Preserved & Sealed |             | Emission Due to: Mo                              | vement of Vehicles &<br>urounding Activities |  |
| Metrological Information                 | Temp: 26 °C | R.Humidity: 70 %                                 | Barometric Pressure: 706 mmHg                |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 29/07/2023  | Test End Date: 04/08/2023                        |  |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakas        |  |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 6.52   |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 9.27   |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part 23   | 100                    | 56.58  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.00  |  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration : -
  - 01. Reported results are related only to the item tested.
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.







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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(BGR Camp)

| FIRST FOR   | TNIGHT                                   |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000000060F Report Issue Date: 05/08/2023 |  |  |  |
| Job Card No : BES/0000060   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/02                           | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24    | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 78.67  | Ge   | neral Information  |  |
|--|--|--|--|
| Protocol: Ambient Air  | 10.00  | Type of Sample: Amb  | ent Air                                      |
| Sample Collected By : Nilesh   | Kumar & Team   | Sampling Plan Refere   | nce: BES/0003                                |
| Sampling Date: 10/07/2023 to 11/07/2023  |  | Sample Receiving & Registration Date: 14/07/2023   |  |
| Sample Condition: OK, Preserved & Scaled   |  | Emission Due to: Mo  | vement of Vehicles &<br>prounding Activities |
| Metrological Information   | Temp: 27 °C  | R.Humidity: 69 %   | Barometric Pressure: 706 mmHg                |
| The state of the s | The second secon | The second secon |  |

| Sample D  | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 14/07/2023                       | Test End Date: 27/07/2023                        |
| Sampling Location: BGR Camp - Core Zone           |  |
| Predominant Wind Direction: From SSW towards NNE  | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 9.83   |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 22.38  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 67.96  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.3   |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.







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Format No : 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(BGR Camp)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000088F                            | Report Issue Date: 05/08/2023            |  |
| Job Card No : BES/0000088  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/10                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /E 1 /                                   | Ge          | neral Information                                |  |  |
|--|-------------|--|--|--|
| Protocol: Ambient Air                    |             | Type of Sample: Ambient Air                      |  |  |
| Sample Collected By: Nilesh Kumar & Team |             | Sampling Plan Reference : BES/0005               |  |  |
| Sampling Date: 27/07/2023 to 28/07/2023  |             | Sample Receiving & Registration Date: 29/07/2023 |  |  |
| Sample Condition: OK, Preserved & Sealed |             | Emission Due to: Mo                              | vement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 26 °C | R.Humidity: 70 %                                 | Barometric Pressure: 706 mmHg                |  |

| Sample D   | escription                                       |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 29/07/2023  | Test End Date: 04/08/2023                        |  |  |  |
| Sampling Location: BGR Camp - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 8.69   |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 20.51  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 58.55  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.17  |  |  |

---END OF REPORT----

- Nerms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of
  18th November 2009)
- Declaration : -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.









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Format No : 7.8F-D4

## TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000066F                            | Report Issue Date: 05/08/2023            |  |
| Job Card No : BES/0000066  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/08                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 78.9 / 1                                 | Ge          | neral Information                                |  |  |
|--|-------------|--|--|--|
| Protocol : Ambient Air                   |             | Type of Sample: Ambient Air                      |  |  |
| Sample Collected By: Nilesh Kumar & Team |             | Sampling Plan Reference : BES/0003               |  |  |
| Sampling Date: 11/07/2023 to 12/07/2023  |             | Sample Receiving & Registration Date: 14/07/2023 |  |  |
| Sample Condition: OK, Preserved & Sealed |             |  | vement of Vehicles &<br>prounding Activities |  |
| Metrological Information                 | Temp: 26 °C | R.Hamidity: 72 %                                 | Barometric Pressure: 706 mmHg                |  |

| Sample D  | Description                                     |
|---|---|
| Sample Temperature at the time of receiving: 5 °C   | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date: 14/07/2023                         | Test End Date: 27/07/2023                       |
| Sampling Location : Kerandari Village - Buffer Zone |   |
| Predominant Wind Direction: From SSW towards NNE    | Customer Representative Name: Mr. Prakash Kumar |

| Analysis Result |  |                   |                             |                   |                        |        |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 17.84  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 33.52  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 70.25  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 30.71  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPC8 Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration : -
  - 01. Reported results are related only to the item tested.
  - This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.







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Certified by: ISO 9001:2015(QMS) & ISO 45001-2018(QHSAS)





Format No: 7.8F-D4

## TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| SECOND FOR   | TNIGHT                                   |
|--|--|
| Unique Lab Report No : TC1203923000000094F                           | Report Issue Date: 05/08/2023            |
| Job Card No : BES/0000094  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JUL/AAQ/16                        | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| - 18° 9 J = 1                            | Ge           | neral Information    |   |
|--|--------------|----------------------|---|
| Protocol : Ambient Air                   |              | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere | nce : BES/0005                                |
| Sampling Date: 28/07/2023 t              |              | Sample Receiving & I | Registration Date: 29/07/2023                 |
| Sample Condition: OK, Preserved & Sealed |              |                      | vement of Vehicles &<br>arrounding Activities |
| Metrological Information                 | Temp: 27 °C  | R.Humidity: 64 %     | Barometric Pressure: 706 mmHg                 |

| Sample D   | escription                                       |
|--|--|
| Sample Temperature at the time of receiving: 5 °C  | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 29/07/2023                        | Test End Date: 04/08/2023                        |
| Sampling Location: Kerandari Village - Buffer Zone |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kuman |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 15.92  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 32.43  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 62.61  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.21  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- · Declaration : -
  - Reported results are related only to the item tested.
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  - 04. All parameters in this report conforms to the specific standard.

Pritamkn.

Configuration Signatory Technical Manager

Page 1 of 1



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Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000113F                            | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/00000117   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/03                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1521 1                                   | Ge           | neral Information                                |   |  |
|--|--------------|--|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air                      |   |  |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere                             | ence : BES/0006                               |  |
| Sampling Date: 12/08/2023 to 13/08/2023  |              | Sample Receiving & Registration Date: 16/08/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |              |  | ovement of Vehicles &<br>grounding Activities |  |
| Metrological Information                 | Temp: 28 °C  | R.Humidity: 71%                                  | Barometric Pressure: 709 mmHg                 |  |
|  |              |  |   |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 16/08/2023  | Test End Date: 28/08/2023                        |  |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.03  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 08,52  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 55.82  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.65  |  |  |

#### ---END OF REPORT----

 Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8,29016/20/90/PCHL of 18th November 2009)

Declaration: -

61. Reported results are related only to the item tested.

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63. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Pritamkn.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagur, Itki Road, Bajra, P.O. Hehal, Dist. Ranchi, Jharkhund. Pin. 834005
Email Id: - biocratenvõrgmail.com. Mobile No. 7369019812, 8340466751, 9608708172



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Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000202F                            | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/00000230   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/11                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 16.0                                     | Ge           | neral Information    |   |
|--|--------------|----------------------|---|
| Protocol: Ambient Air                    |              | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere | nce : BES/0018                                |
| Sampling Date: 28/08/2023                | o 29/08/2023 | Sample Receiving & I | Registration Date : 30/08/2023                |
| Sample Condition: OK, Preserved & Sealed |              |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 29 °C  | R.Humidity: 70 %     | Barometric Pressure: 709 mmHg                 |

| Sample Description   |                           |  |  |  |
|--|---------------------------|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C   |                           |  |  |  |
| Test Start Date: 30/08/2023  | Test End Date: 05/09/2023 |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |                           |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   Customer Representative Name: Mr. Prakash Kumar |                           |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.00  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 09.48  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 56.21  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.96  |  |  |  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- · Declaration: -
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Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000112F                            | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000116  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/02                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 160/                                     | Ge            | neral Information    |   |
|--|---------------|----------------------|---|
| Protocol: Ambient Air                    |               | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Nilesh             | Kumar & Team  | Sampling Plan Refere | nce : BES/0006                                |
| Sampling Date: 12/08/2023                | to 13/08/2023 | Sample Receiving & I | Registration Date : 16/08/2023                |
| Sample Condition: OK, Preserved & Scaled |               | 7.30                 | ovement of Vehicles &<br>grounding Activities |
| Metrological Information                 | Temp: 28 °C   | R.Humidity: 71%      | Barometric Pressure: 709 mmHg                 |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 16/08/2023  | Test End Date: 28/08/2023                        |  |  |  |  |
| Sampling Location: BGR Work Shop Core Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.88  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 19.78  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 57.48  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 24.78  |  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCHL of 18th November 2009)

Declaration: -

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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000201F                            | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000229  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/10                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1601 1                       | Ge              | neral Information    | - CE  |
|------------------------------|-----------------|----------------------|---|
| Protocol: Ambient Air        |                 | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere | nce : BES/0018                                |
| Sampling Date: 28/08/2023    | 0 29/08/2023    | Sample Receiving & I | Registration Date : 30/08/2023                |
| Sample Condition: OK, Pre    | served & Sealed |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information     | Temp: 29 °C     | R.Humidity: 70 %     | Barometric Pressure: 709 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/08/2023  | Test End Date: 05/09/2023                        |  |  |  |
| Sampling Location : BGR Work Shop - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.23  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 20,61  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 57.62  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 24.98  |  |  |  |

---END OF REPORT----

 Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

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04. All parameters in this report conforms to the specific standard.

100

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Uki Roud, Bajra, P.O - Hehli, 5000 Fanchi, Jharkhand, Pin -834005 Email Id: biocratery@gmail.com. Mobile No - 7369019812, 8340466751, 9608708172



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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)





Format No: 7,8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000117F                             | Report Issue Date ; 09/09/2023           |  |
| Job Card No : BES/0000121   | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/07                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 160/                                     | Ge           | neral Information                                |   |  |
|--|--------------|--|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air                      |   |  |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere                             | nce : BES/0006                                |  |
| Sampling Date: 13/08/2023 to 14/08/2023  |              | Sample Receiving & Registration Date: 16/08/2023 |   |  |
| Sample Condition: OK, Preserved & Scaled |              |  | ovement of Vehicles &<br>prounding Activities |  |
| Metrological Information                 | Temp: 27 °C  | R.Humidity: 70%                                  | Barometric Pressure: 711 mmHg                 |  |

| Sample Description                                |  |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 16/08/2023                       | Test End Date: 28/08/2023                        |  |
| Sampling Location: Jordag School - Buffer Zone    | And the second second second second              |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kumar |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | <5     |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.48  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 40.12  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 13.56  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

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Pritam kin.

Authorized Signatory Technical Manager

Page 1 of 1

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Format No: 7.8F-04

#### TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| SECOND FORTNIGHT  |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000206F                             | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000234   | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/15                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

M/s NTPC Ltd. Client Name & Address: -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 75.9.7                                   | Ge           | neral Information                                 |   |  |
|--|--------------|---|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere                              | nce : BES/0018                                |  |
| Sampling Date: 29/08/2023 to 30/08/2023  |              | Sample Receiving & Registration Date : 30/08/2023 |   |  |
| Sample Condition: OK, Preserved & Scaled |              |   | ovement of Vehicles &<br>prounding Activities |  |
| Metrological Information                 | Temp: 28 °C  | R.Humidity: 69 %                                  | Barometric Pressure: 711 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/08/2023  | Test End Date: 05/09/2023                        |  |  |  |
| Sampling Location: Jorday School - Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | <5     |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>z</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 08.14  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 40.62  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 13.88  |  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000118F                             | Report Issue Date: 09/09/2023            |  |
| Job Card No: BES/0000122  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/08                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /53/ 1                                   | Ge           | neral Information                                 | 100   |  |
|--|--------------|---|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By: Nilesh              | Kumar & Team | Sampling Plan Refere                              | nce : BES/0006                                |  |
| Sampling Date: 13/08/2023 to 14/08/2023  |              | Sample Receiving & Registration Date : 16/08/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |              | 50.00   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 27 °C  | R.Humidity: 70 %                                  | Barometric Pressure: 711 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 16/08/2023  | Test End Date: 28/08/2023                        |  |  |  |
| Sampling Location: Kerandari Village - Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 15.44  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 31.69  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 61.79  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.55  |  |  |  |

--- END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCHL of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

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Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000207F                            | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000235  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/16                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /6.3 /. /                                | Ge            | neral Information   |   |  |
|--|---------------|---|---|--|
| Protocol: Ambient Air                    |               | Type of Sample: Ambient Air   |   |  |
| Sample Collected By : Nilesh             | Kumar & Team  | Sampling Plan Refere  | nce : BES/0018                                |  |
| Sampling Date: 29/08/2023                | to 30/08/2023 | Sample Receiving & I  | Registration Date : 30/08/2023                |  |
| Sample Condition: OK, Preserved & Sealed |               | Total Control of the | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 28 °C   | R.Humidity: 69 %  | Barometric Pressure: 711 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/08/2023  | Test End Date: 05/09/2023                        |  |  |  |  |
| Sampling Location: Kerandari Village - Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 15.86  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 32.45  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 62.05  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.98  |  |  |

---END OF REPORT----

 Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B 29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000115F                             | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000119   | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/05                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 161/                                      | Ge            | neral Information                  |   |  |
|---|---------------|------------------------------------|---|--|
| Protocol: Ambient Air                     |               | Type of Sample: Ambient Air        |   |  |
| Sample Collected By : Nilesh Kumar & Team |               | Sampling Plan Reference : BES/0006 |   |  |
| Sampling Date: 13/08/2023:                | to 14/08/2023 | Sample Receiving & I               | Registration Date: 16/08/2023                 |  |
| Sample Condition: OK, Preserved & Sealed  |               |                                    | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                  | Temp: 27 °C   | R.Humidity: 70 %                   | Barometric Pressure: 711 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 16/08/2023  | Test End Date : 28/08/2023                       |  |  |  |  |
| Sampling Location: Manatu village - Buffer Zone  |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.84  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | 15 5182 Part-06   | 80                     | 08.31  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 41.28  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 15,36  |  |  |  |

-END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPC8 Notification No B.29016/20/90/PCI-L of 18th November 2009)
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

SERVIC SERVICE OF SERV

Authorized Signatory Technical Manager

Add: - Saevesijwan Nagar, Itki Road, Bajra, P.O.: Hehal, Dist. Ranchi, tharkhand. Pin. -834005
Email Id: - biocratens/digmail.com. Mobile No. - 7369019812, 8340466751, 9608708172



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FORTNIGHT  |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000204F                             | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000232   | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/13                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 109/                                     | Ge           | neral Information    | (00)  |
|--|--------------|----------------------|---|
| Protocol: Ambient Air                    |              | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere | nce : BES/0018                                |
| Sampling Date: 29/08/2023                | o 30/08/2023 | Sample Receiving & I | Registration Date : 30/08/2023                |
| Sample Condition: OK, Preserved & Sealed |              |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 28 °C  | R.Humidity: 69 %     | Barometric Pressure: 711 mmHg                 |

| Sample Description   |   |  |  |  |
|--|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |  |
| Test Start Date: 30/08/2023  | Test End Date: 05/09/2023                       |  |  |  |
| Sampling Location: Manatu village - Buffer Zone  |   |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kuma |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.02  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 08.53  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | µg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 41.82  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 15.78  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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04. All parameters in this report conforms to the specific standard.

SERVICE PANCH S

Y Authorized Signatory Technical Manager

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Format No: 7.87-04

### TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000116F                             | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000120   | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/06                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1601                        | Ge              | neral Information           |   |  |
|-----------------------------|-----------------|-----------------------------|---|--|
| Protocol: Ambient Air       |                 | Type of Sample: Ambient Air |   |  |
| Sample Collected By: Nilesh | Kumar & Team    | Sampling Plan Refere        | nce : BES/0006                              |  |
| Sampling Date: 13/08/2023   | to 14/08/2023   | Sample Receiving & I        | Registration Date: 16/08/2023               |  |
| Sample Condition: OK, Pre   | served & Sealed |                             | ovement of Vehicles & arrounding Activities |  |
| Metrological Information    | Temp: 27 °C     | R.Humidity: 70 %            | Barometric Pressure: 711 mmHg               |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 16/08/2023  | Test End Date: 28/08/2023                        |  |  |  |
| Sampling Location: Pahra Village - Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.39  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.80  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 44.78  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 16.82  |  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPC8 Notification No B.29016/20/90/PCI-L of 18th November 2009)
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Format No: 78F-04

#### TEST REPORT

#### AMBIENT AIR QUALITY

(Pahra Village)

| SECOND FORTNIGHT  |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000205F                             | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000233   | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/14                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                              | Ge              | neral Information           | 1   |  |
|------------------------------|-----------------|-----------------------------|---|--|
| Protocol: Ambient Air        |                 | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere        | nce: BES/0018                                 |  |
| Sampling Date: 29/08/2023:   | 0 30/08/2023    | Sample Receiving & I        | Registration Date : 30/08/2023                |  |
| Sample Condition: OK, Pre-   | served & Sealed |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information     | Temp: 28 °C     | R.Humidity: 69 %            | Barometric Pressure: 711 mmHg                 |  |

| Sample D   | escription                                       |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/08/2023  | Test End Date: 05/09/2023                        |  |  |  |  |
| Sampling Location: Pahra Village - Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.74  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.23  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 45.22  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.25  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

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Format No: 7.87-04

#### TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000114F                            | Report Issue Date: 09/09/2023            |  |
| Job Card No: BES/0000118   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/04                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /53/                         | Ge              | neral Information           |   |  |
|------------------------------|-----------------|-----------------------------|---|--|
| Protocol: Ambient Air        |                 | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere        | nce : BES/0006                                |  |
| Sampling Date: 12/08/2023    | to 13/08/2023   | Sample Receiving & I        | Registration Date : 16/08/2023                |  |
| Sample Condition: OK, Pre    | served & Sealed |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information     | Temp: 28 °C     | R.Humidity: 71%             | Barometric Pressure: 709 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 16/08/2023  | Test End Date: 28/08/2023                        |  |  |  |  |
| Sampling Location: Tarbesa Village - Core Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.05  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 12.34  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 58.75  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.12  |  |  |  |

---END OF REPORT----

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009

Declaration: -

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Intamka.



Authorized Signatory Technical Manager

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Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000203F                            | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000231  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/12                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /53/                         | Ge              | neral Information           |   |  |
|------------------------------|-----------------|-----------------------------|---|--|
| Protocol: Ambient Air        |                 | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere        | nce: BES/0018                                 |  |
| Sampling Date: 28/08/2023    | o 29/08/2023    | Sample Receiving & I        | Registration Date: 30/08/2023                 |  |
| Sample Condition: OK, Pre    | served & Sealed |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information     | Temp: 29 °C     | R.Humidity: 70 %            | Barometric Pressure: 709 mmHg                 |  |

| Sample Description   |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |  |
| Test Start Date: 30/08/2023  | Test End Date: 05/09/2023                        |  |  |  |  |  |
| Sampling Location: Tarhesa Village - Core Zone   |  |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06,98  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 13.83  |  |  |  |
| 93       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 59.05  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.51  |  |  |  |

---END OF REPORT----

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

Prifamoka.

SERVICH BASEN

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Iki Road, Bajra, P.O.-Hebal, Dest. Handai, Barkhand, Pin -834005 Email Id: - biocratenvicegmail.com. Mobile No. - 7369019812, 8340466751, 9608708172



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Format No: 7.8F-04

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## TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| FIRST FORTNIGHT   |  |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000000111F Report Issue Date: 09/09/2023 |  |  |  |
| Job Card No : BES/0000115   | Discipline : Chemical                    |  |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/01                           | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24   | Work Order Date : 24/06/2023             |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /(0)/ /                                   | Ge          | neral Information                                 |   |  |
|---|-------------|---|---|--|
| Protocol: Ambient Air                     |             | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By : Nilesh Kumar & Team |             | Sampling Plan Reference : BES/0006                |   |  |
| Sampling Date: 12/08/2023 to 13/08/2023   |             | Sample Receiving & Registration Date : 16/08/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed  |             |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                  | Temp: 28 °C | R.Humidity: 71 %                                  | Barometric Pressure: 709 mmHg                 |  |

| Sample De   | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C       | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 16/08/2023                             | Test End Date : 28/08/2023                       |
| Sampling Location: Baseria Village (NTPC Camp) - Core 2 | Zone   |
| Predominant Wind Direction: From WNW towards ESE        | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.03  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.18  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | µg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 46.35  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 16.85  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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02. This report is the property of laboratory & should not be used unless advises

03. Items tested are as per the standard requirements.

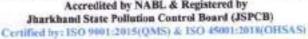
04. All parameters in this report conforms to the specific standard.

Pritamkn.
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#### TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| SECOND FOR  | SECOND FORTNIGHT                         |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000200F                             | Report Issue Date: 09/09/2023            |  |
| Job Card No : BES/0000228   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/AUG/AAQ/09                         | Group : Atmospheric Pollution            |  |
| Type of Industry : Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1691                         | Ge              | neral Information    |   |
|------------------------------|-----------------|----------------------|---|
| Protocol: Ambient Air        |                 | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere | nce : BES/0018                                |
| Sampling Date: 28/08/2023 t  |                 | Sample Receiving & I | Registration Date: 30/08/2023                 |
| Sample Condition: OK, Pre-   | served & Sealed |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information     | Temp: 29 °C     | R.Humidity: 70 %     | Barometric Pressure: 709mmHg                  |

| Sample De   |  |
|---|--|
| Sample Temperature at the time of receiving: 5 °C       | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 30/08/2023                             | Test End Date: 05/09/2023                        |
| Sampling Location: Baseria Village (NTPC Camp) - Core 2 | Zone   |
| Predominant Wind Direction: From WNW towards ESE        | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (5O <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.58  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.60  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 46,96  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.56  |  |  |  |

---END OF REPORT----

Norms: NAACIS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

(i). Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Pritam Kn.

Authorized Signatory Technical Manager

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#### TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000261F                            | Report Issue Date: 10/10/2023            |  |
| Job Card No: BES/0000329   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/05                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information                  |   |  |
|--|--------------|------------------------------------|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air        |   |  |
| Sample Collected By: Nilesh Kumar & Team |              | Sampling Plan Reference : BES/0032 |   |  |
| Sampling Date: 12/09/2023                | o 13/09/2023 | Sample Receiving & I               | Registration Date: 15/09/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |              |                                    | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 28 °C  | R.Humidity: 71 %                   | Barometric Pressure: 709 mmHg                 |  |

| Sample De  | escription                                       |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/09/2023  | Test End Date: 25/09/2023                        |  |  |  |
| Sampling Location: Manatu village - Buffer Zone  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.65  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 09.18  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 45.35  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 16.61  |  |  |  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - 03. Items tested are as per the standard requirements.

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All parameters in this report conforms to the specific standard



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Certified by: ISO 9001:2015(QM5) & ISO 45001(2018(OHSA5)



Format No: 7.8F-04

TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000000353F                             | Report Issue Date: 10/10/2023            |
| Job Card No: BES/0000453  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/13                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

M/s NTPC Ltd. Client Name & Address: -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 180 /                                    | Ge           | neral Information    |                               |
|--|--------------|----------------------|-------------------------------|
| Protocol : Ambient Air                   |              | Type of Sample: Ambi | ent Air                       |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere |                               |
| Sampling Date : 28/09/2023 1             |              | Sample Receiving & F | Registration Date: 29/09/2023 |
| Sample Condition: OK, Preserved & Sealed |              |                      | prounding Activities          |
| Metrological Information                 | Temp: 27 °C  | R.Humidity: 68 %     | Barometric Pressure: 711 mmHg |

| Sample De   | escription                                       |  |  |  |
|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 |  |  |  |  |
| Test Start Date : 30/09/2023  | Test End Date: 04/10/2023                        |  |  |  |
| Sampling Location: Manatu village - Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE  | Customer Representative Name : Mr. Prakash Kuman |  |  |  |

| Analysis Result |  |             |                             |                   |                        |        |  |  |
|-----------------|--|-------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit        | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³       | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.36  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³       | 24 Hours                    | 15 5182 Part-06   | 80                     | 08.83  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³       | 24 Hours                    | IS 5182 Part 23   | 100                    | 44,63  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | $\mu g/m^3$ | 24 Hours                    | IS 5182 Part 24   | 60                     | 16.15  |  |  |

---END OF REPORT---

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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vized Signatory Technical Manager



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000262F                             | Report Issue Date: 10/10/2023            |  |
| Job Card No: BES/0000330  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/06                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /63/                                      | Ge          | neral Information                  |   |  |
|---|-------------|------------------------------------|---|--|
| Protocol : Ambient Air                    |             | Type of Sample: Amb                | ent Air                                       |  |
| Sample Collected By : Nilesh Kumar & Team |             | Sampling Plan Reference : BES/0032 |   |  |
| Sampling Date: 12/09/2023 t               |             | Sample Receiving & I               | Registration Date: 15/09/2023                 |  |
| Sample Condition: OK, Preserved & Scaled  |             |                                    | ovement of Vehicles &<br>grounding Activities |  |
| Metrological Information                  | Temp: 28 °C | R.Humidity: 71 %                   | Barometric Pressure: 709 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/09/2023  | Test End Date: 25/09/2023                        |  |  |  |
| Sampling Location: Pahra Village - Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.21  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | 15 5182 Part-06   | 80                     | 06.64  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 44.79  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 16.52  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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#### TEST REPORT

Format No. 7.85-04

#### AMBIENT AIR QUALITY

(Pahra Village)

| SECOND FOR   | RTNIGHT                                  |
|--|--|
| Unique Lab Report No: TC1203923000000354F                            | Report Issue Date: 10/10/2023            |
| Job Card No : BES/0000454  | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/14                        | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /9/                                      | Ge            | neral Information    |   |
|--|---------------|----------------------|---|
| Protocol: Ambient Air                    |               | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By : Nilesh             | Kumar & Team  | Sampling Plan Refere | nce : BES/0047                                |
| Sampling Date : 28/09/2023 :             | to 29/09/2023 | Sample Receiving & I | Registration Date : 29/09/2023                |
| Sample Condition: OK, Preserved & Sealed |               | 30                   | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 27 °C   | R.Humidity: 68 %     | Barometric Pressure: 711 mmHg                 |
|  |               |                      |   |

| Sample D   | escription                                       |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving : 5 °C Temperature at the time of Analysis : 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/09/2023  | Test End Date: 04/10/2023                        |  |  |  |  |
| Sampling Location: Pahra Village – Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From SSW towards NNE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.02  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.44  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 44.14  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 16,09  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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### TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000260F                             | Report Issue Date: 10/10/2023            |  |
| Job Card No : BES/0000328   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/04                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                              | Ge              | neral Information           |   |  |
|------------------------------|-----------------|-----------------------------|---|--|
| Protocol: Ambient Air        |                 | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere        | nce : BES/0032                                |  |
| Sampling Date: 11/09/2023 t  | o 12/09/2023    | Sample Receiving & F        | Registration Date: 15/09/2023                 |  |
| Sample Condition: OK, Pre-   | served & Sealed |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information     | Temp: 27 °C     | R.Humidity: 69 %            | Barometric Pressure: 711 mmlig                |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 15/09/2023  | Test End Date: 25/09/2023                        |  |  |  |  |
| Sampling Location: Tarhesa Village - Core Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>5</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.33  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 11,49  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | µg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 54.02  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.32  |  |

---END OF REPORT---

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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Format No: 7.8F-04

#### TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FORTNIGHT  |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000352F                             | Report Issue Date: 10/10/2023            |  |
| Job Card No : BES/0000452   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/12                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1571                                     | Ge           | neral Information           |   |  |
|--|--------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air |   |  |
| Sample Collected By: Nilesh              | Kumar & Team | Sampling Plan Refere        | nce : BES/0047                                |  |
| Sampling Date: 27/09/2023                | o 28/09/2023 | Sample Receiving & I        | Registration Date : 29/09/2023                |  |
| Sample Condition: OK, Preserved & Sealed |              |                             | ovement of Vehicles &<br>grounding Activities |  |
| Metrological Information                 | Temp: 27 °C  | R.Humidity: 67 %            | Barometric Pressure: 712 mmHg                 |  |
| 1,4808                                   |              | Su                          | rrounding Activities                          |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/09/2023  | Test End Date : 04/10/2023                       |  |  |  |  |
| Sampling Location: Tarhesa Village - Core Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.38  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>z</sub> )                          | µg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 11.23  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 53.47  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.84  |  |  |

---END OF REPORT---

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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0). Items tested are as per the standard requirements.

Fested by

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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000257F                             | Report Issue Date: 10/10/2023            |  |
| Job Card No : BES/0000325   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/01                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |
|   |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1687 1                                   | Ge           | neral Information                                |   |  |
|--|--------------|--|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Amb                              | ent Air                                       |  |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere                             | nce : BES/0032                                |  |
| Sampling Date: 11/09/2023 to 12/09/2023  |              | Sample Receiving & Registration Date: 15/09/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |              |  | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 27 °C  | R.Humidity: 69 %                                 | Barometric Pressure: 711 mmHg                 |  |

| Sample De   | escription                                       |
|---|--|
| Sample Temperature at the time of receiving: 5 °C       | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 15/09/2023                             | Test End Date : 25/09/2023                       |
| Sampling Location: Baseria Village (NTPC Camp) - Core 2 | Cone   |
| Predominant Wind Direction: From WNW towards ESE        | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.64  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.62  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 41.43  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 16.24  |  |  |

---END OF REPORT---

Norms: NAAQS (National Ambient Air Quality Standards as per published in the garette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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#### TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000000349F                             | Report Issue Date : 10/10/2023           |
| Job Card No : BES/0000449   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/09                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1837                                      | Ge          | neral Information                                |  |  |
|---|-------------|--|--|--|
| Protocol: Ambient Air                     |             | Type of Sample: Ambi                             | ent Air  |  |
| Sample Collected By : Nilesh Kumar & Team |             | Sampling Plan Reference : BES/0047               |  |  |
| Sampling Date: 27/09/2023 to 28/09/2023   |             | Sample Receiving & Registration Date: 29/09/2023 |  |  |
| Sample Condition: OK, Preserved & Sealed  |             |  | ovement of Velsicles &<br>grounding Activities |  |
| Metrological Information                  | Temp: 27 °C | R.Humidity: 67 %                                 | Barometric Pressure: 712mmHg                   |  |

| Sample De   |  |
|---|--|
| Sample Temperature at the time of receiving: 5 °C       | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 30/09/2023                             | Test End Date: 04/10/2023                        |
| Sampling Location: Baseria Village (NTPC Camp) - Core 2 | Zone   |
| Predominant Wind Direction: From WNW towards ESE        | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.30  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 14.91  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>50</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 40.62  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 15.96  |  |  |  |

---END OF REPORT---

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29015/20/90/PCI-L of 18th November 2009)

Declaration: -

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Format No: 7.8F-04

#### TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| FIRST FORT  | INIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000000259F                             | Report Issue Date: 10/10/2023            |
| Job Card No : BES/00000327  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/03                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7637                                      | Ge          | neral Information                                |   |  |
|---|-------------|--|---|--|
| Protocol: Ambient Air                     |             | Type of Sample: Ambient Air                      |   |  |
| Sample Collected By : Nilesh Kumar & Team |             | Sampling Plan Reference : BES/0032               |   |  |
| Sampling Date: 11/09/2023 to 12/09/2023   |             | Sample Receiving & Registration Date: 15/09/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed  |             |  | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                  | Temp: 27 °C | R.Humidity: 69 %                                 | Barometric Pressure: 711 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/09/2023  | Test End Date: 25/09/2023                        |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (50 <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.28  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 08,05  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 51.61  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.17  |  |  |  |

---END OF REPORT----

Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| SECOND FORTNIGHT  |  |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000000351F                             | Report Issue Date: 10/10/2023            |  |  |
| Job Card No : BES/00000451  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/11                         | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                              | Ge              | neral Information    |   |
|------------------------------|-----------------|----------------------|---|
| Protocol: Ambient Air        |                 | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere | nce : BES/0047                                |
| Sampling Date: 27/09/2023    | to 28/09/2023   | Sample Receiving & I | Registration Date : 29/09/2023                |
| Sample Condition: OK, Pre-   | served & Sealed |                      | ovement of Vehicles &<br>grounding Activities |
| Metrological Information     | Temp: 27 °C     | R.Humidity: 67%      | Barometric Pressure: 712 mmHg                 |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/09/2023  | Test End Date: 04/10/2023                        |  |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05,41  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.31  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 50.87  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 24.92  |  |  |

-END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - 04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

#### TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| FIRST FORTNIGHT   |  |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000000258F                             | Report Issue Date: 10/10/2023            |  |  |
| Job Card No : BES/0000326   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/02                         | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /63/ E                                   | Ge            | neral Information           |   |  |
|--|---------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |               | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Nilesh             | Kumar & Team  | Sampling Plan Refere        | nce : BES/0032                                |  |
| Sampling Date: 11/09/2023                | to 12/09/2023 | Sample Receiving & I        | Registration Date : 15/09/2023                |  |
| Sample Condition: OK, Preserved & Sealed |               |                             | ovement of Vehicles &<br>grounding Activities |  |
| Metrological Information                 | Temp: 27 °C   | R.Humidity: 69 %            | Barometric Pressure: 711 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 15/09/2023  | Test End Date: 25/09/2023                        |  |  |  |  |
| Sampling Location: BGR Work Shop - Core Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.41  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 18.21  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 51.98  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 22.12  |  |  |

#### ---END OF REPORT---

Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Edgaprdinary, CPCB Notification No B.29016/20/9C/PCI-L of 18th November 2009)

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Format No. 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| SECOND FORTNIGHT  |  |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000000350F                             | Report Issue Date: 10/10/2023            |  |  |
| Job Card No : BES/0000450   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/10                         | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test ; Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7637 1                       | Ge              | neral Information    |   |
|------------------------------|-----------------|----------------------|---|
| Protocol: Ambient Air        |                 | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Nilesh | Kumar & Team    | Sampling Plan Refere | nce : BES/0047                                |
| Sampling Date: 27/09/2023 t  | o 28/09/2023    | Sample Receiving & I | Registration Date ; 29/09/2023                |
| Sample Condition: OK, Pre    | served & Sealed | 9.000                | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information     | Temp: 27 °C     | R.Humidity: 67%      | Barometric Pressure: 712 mmHg                 |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/09/2023  | Test End Date: 04/10/2023                        |  |  |  |  |
| Sampling Location: BGR Work Shop - Core Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.14  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 17.57  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 51.26  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 21.85  |  |  |

---END OF REPORT-

 Norms: NAAOS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/9C/PCI-L of 18th November 2009)

Declaration: -

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02. This report is the property of laboratory & should not be used unless advised,

63. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard.





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Format No: 7.85-04

## TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000263F                            | Report Issue Date: 10/10/2023            |  |
| Job Card No : BES/0000331  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/07                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /83/                                     | Ge           | neral Information    |  |
|--|--------------|----------------------|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambi | ent Air  |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere | nce : BES/0032                                 |
| Sampling Date: 12/09/2023 t              | o 13/09/2023 | Sample Receiving & I | Registration Date: 15/09/2023                  |
| Sample Condition: OK, Preserved & Scaled |              |                      | overnent of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 28 °C  | R.Humidity: 71 %     | Barometric Pressure: 709 mmHg                  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 15/09/2023  | Test End Date: 25/09/2023                        |  |  |  |  |
| Sampling Location: Jordag School - Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>2</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | <5.0   |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.56  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 35.76  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 12.57  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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04. All parameters in this report conforms to the specific standard.





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## TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000355F                            | Report Issue Date: 10/10/2023            |  |
| Job Card No: BES/0000455   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/15                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /63/                                     | Ge           | neral Information           |   |  |
|--|--------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air |   |  |
| Sample Collected By: Nilesh              | Kumar & Team | Sampling Plan Refere        | nce : BES/0047                                |  |
| Sampling Date: 28/09/2023                | o 29/09/2023 | Sample Receiving & I        | Registration Date : 29/09/2023                |  |
| Sample Condition: OK, Preserved & Scaled |              |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 27 °C  | R.Humidity: 68%             | Barometric Pressure: 711 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/09/2023  | Test End Date: 04/10/2023                        |  |  |  |  |
| Sampling Location: Jordag School - Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>1</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | <5.0   |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.47  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 35.12  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 12.12  |  |  |  |

---END OF REPORT---

 Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29015/20/9C/PCI-L of 18th November 2009)

Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

03. Items testyll are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

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Format No. 7,85-04

## TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| FIRST FORT  | FIRST FORTNIGHT                          |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000000264F                             | Report Issue Date: 10/10/2023            |  |  |
| Job Card No: BES/0000332  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/08                         | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1891                         | Ge           | neral Information    |  |
|------------------------------|--------------|----------------------|--|
| Protocol : Ambient Air       |              | Type of Sample: Ambi | ent Air  |
| Sample Collected By : Nilesh | Kumar & Team | Sampling Plan Refere |  |
| Sampling Date: 12/09/2023 t  |              |                      | Registration Date: 15/09/2023                  |
| Sample Condition: OK, Pre-   |              | Emission Due to: M   | ovement of Vehicles &<br>arrounding Activities |
| Metrological Information     | Temp: 28 °C  | R.Humidity: 71 %     | Barometric Pressure: 709 mmHg                  |

| Sample De  | escription                                       |  |
|--|--|--|
| Sample Temperature at the time of receiving: 5 °C  | Temperature at the time of Analysis : 25 ± 2 °C  |  |
| Test Start Date: 15/09/2023                        | Test End Date: 25/09/2023                        |  |
| Sampling Location: Kerandari Village - Buffer Zone |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kuman |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 14.92  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 29,32  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | µg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 57.08  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 24,45  |  |  |

---END OF REPORT--

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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03. Items tested/are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Anch Signatory Technical Manager



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#### TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| SECOND FORTNIGHT  |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000000356F                             | Report Issue Date: 10/10/2023            |  |
| Job Card No : BES/0000456   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/SEP/AAQ/16                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /63/ /                                   | Ge            | neral Information           |  |  |
|--|---------------|-----------------------------|--|--|
| Protocol: Ambient Air                    |               | Type of Sample: Ambient Air |  |  |
| Sample Collected By: Nilesh              | Kumar & Team  | Sampling Plan Refere        | nce : BES/0047                                 |  |
| Sampling Date: 28/09/2023                | to 29/09/2023 | Sample Receiving & I        | Registration Date : 29/09/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |               |                             | overnent of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 27 °C   | R.Humidity: 68 %            | Barometric Pressure: 711 mmHg                  |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/09/2023  | Test End Date: 04/10/2023                        |  |  |  |  |
| Sampling Location: Kerandari Village - Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name ; Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 14.27  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 28,96  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 56.49  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 23.93  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





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# TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000404F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/00000553   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/03                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|   | Ger          | neral Information           |   |  |
|---|--------------|-----------------------------|---|--|
| Protocol: Ambient Air                     |              | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manish Kumar & Team |              | Sampling Plan Refere        | nce : BES/0064                                |  |
| Sampling Date: 10/10/2023 t               | o 11/10/2023 | Sample Receiving & I        | Registration Date: 14/10/2023                 |  |
| Sample Condition: OK, Preserved & Sealed  |              |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                  | Temp: 26 °C  | R.Humidity: 65 %            | Barometric Pressure: 729 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving : $5  ^{\circ}\text{C}$ Temperature at the time of Analysis : $25 \pm 2  ^{\circ}\text{C}$ |  |  |  |  |
| Test Start Date: 14/10/2023  | Test End Date: 28/10/2023                        |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.87  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.78  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 55.17  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.34  |  |  |  |

---END OF REPORT----

- Norms: NAAQ5 (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless a
  - 03. Items tested are as per the standard requirements.
  - 64. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

#### TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000492F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/00000671   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/11                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

M/s NTPC Ltd. Client Name & Address: -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7537                                     | Ge             | neral Information                                 |   |
|--|----------------|---|---|
| Protocol: Ambient Air                    |                | Type of Sample: Amb                               | ient Air                                      |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere                              | nce : BES/0077                                |
| Sampling Date: 27/10/2023 to 28/10/2023  |                | Sample Receiving & Registration Date : 30/10/2023 |   |
| Sample Condition: OK, Preserved & Sealed |                |   | ovement of Vehicles &<br>prounding Activities |
| Metrological Information                 | Temp: 27 °C    | R.Humidity: 67%                                   | Barometric Pressure: 726 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/10/2023  | Test End Date: 04/11/2023                        |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.86  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.09  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>20</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 56.14  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.09  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Natification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 62. This report is the property of laboratory & should not be used unless advised.
  - Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000403F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000552  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/02                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 16.5 / 1                                  | Ger          | neral Information    |   |
|---|--------------|----------------------|---|
| Protocol: Ambient Air                     |              | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manish Kumar & Team |              | Sampling Plan Refere | nce: BES/0064                                 |
| Sampling Date: 10/10/2023 t               | o 11/10/2023 | Sample Receiving & I | Registration Date: 14/10/2023                 |
| Sample Condition: OK, Preserved & Sealed  |              |                      | ovement of Vehicles &<br>prounding Activities |
| Metrological Information                  | Temp: 26 °C  | R.Humidity: 65 %     | Barometric Pressure: 729 mmHg                 |

| Sample   | Description                                     |  |  |  |  |
|--|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |  |  |
| Test Start Date: 14/10/2023  | Test End Date: 28/10/2023                       |  |  |  |  |
| Sampling Location: BGR Work Shop - Core Zone   |   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name: Mr. Prakash Kumar |  |  |  |  |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.79  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.70  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 57.80  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 24.30  |

---END OF REPORT----

 Norms : NAAGS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advise

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





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Formet No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000491F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000670  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/10                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7537                                     | Ge             | neral Information    |   |
|--|----------------|----------------------|---|
| Protocol: Ambient Air                    |                | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By: Manis               | h Kumar & Team | Sampling Plan Refere | nce : BES/0077                                |
| Sampling Date: 27/10/2023 to 28/10/2023  |                | Sample Receiving & I | Registration Date : 30/10/2023                |
| Sample Condition: OK, Preserved & Sealed |                |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 27 °C    | R.Humidity: 67 %     | Barometric Pressure: 726 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/10/2023  | Test End Date: 04/11/2023                        |  |  |  |
| Sampling Location: BGR Work Shop - Core Zone   |  |  |  |  |
| Predominant Wind Direction : From NW towards SE  | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.15  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.83  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 58.15  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.70  |  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advises
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Tested by

04. All parameters in this report conforms to the specific standard.



#### (BIOCRAT ENVIRONMENTAL LAB)

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Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000408F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000557  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/07                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 71027 9                                  | Ger            | neral Information    |   |
|--|----------------|----------------------|---|
| Protocol : Ambient Air                   | 71550          | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere | nee : BES/0064                                |
| Sampling Date: 11/10/2023 t              | o 12/10/2023   | Sample Receiving & I | Registration Date: 14/10/2023                 |
| Sample Condition: OK, Preserved & Sealed |                |                      | ovement of Vehicles &<br>grounding Activities |
| Metrological Information                 | Temp: 27 °C    | R.Humidity: 67 %     | Barometric Pressure: 724 mmHg                 |

| Sample  | Description                                      |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |
| Test Start Date: 14/10/2023                       | Test End Date: 28/10/2023                        |  |  |
| Sampling Location: Jordag School - Buffer Zone    |  |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | < 5.0  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>z</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.64  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 39.17  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 13.94  |  |  |

-END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration;
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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000496F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000675  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/15                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /63/                                     | Ge             | neral Information    |   |
|--|----------------|----------------------|---|
| Protocol: Ambient Air                    |                | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere | nce : BES/0077                                |
| Sampling Date: 28/10/2023 t              | to 29/10/2023  | Sample Receiving & I | Registration Date: 30/10/2023                 |
| Sample Condition: OK, Preserved & Sealed |                |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 27 °C    | R.Humidity: 65 %     | Barometric Pressure: 727 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/10/2023  | Test End Date: 04/11/2023  |  |  |  |
| Sampling Location: Jordag School - Buffer Zone   | A company of the comp |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar   |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | <5.0   |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.56  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 40.36  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 14.83  |  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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Formet No: 7.8F-04

#### TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| FIRST FORT  | NIGHT                                    |
|---|--|
| Unique Lab Report No: TC1203923000000409F                             | Report Issue Date: 08/11/2023            |
| Job Card No : BES/0000558   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/08                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

M/s NTPC Ltd. Client Name & Address: -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| E /E3./                     | Ge   | neral Information    |   |
|-----------------------------|--|----------------------|---|
| Protocol: Ambient Air       |  | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis | h Kumar & Team   | Sampling Plan Refere | nce: BES/0064                                 |
| Sampling Date: 11/10/2023 t | Control of the Contro | Sample Receiving & I | Registration Date: 14/10/2023                 |
| Sample Condition: OK, Pre-  | served & Scaled  |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 27 °C  | R.Humidity: 67%      | Barometric Pressure: 724 mmlig                |

| Sample Do  | escription                                       |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 14/10/2023  | Test End Date: 28/10/2023                        |  |  |  |
| Sampling Location: Kerandari Village - Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From WNW towards ESE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 15.48  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 26.92  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | µg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 60.78  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.51  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
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(BIOCRAT ENVIRONMENTAL LAB)

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### TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000497F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000676  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/16                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge             | neral Information    |   |
|--|----------------|----------------------|---|
| Protocol: Ambient Air                    |                | Type of Sample: Amb  | ient Air  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere | nce ; BES/0077                                  |
| Sampling Date: 28/10/2023 t              | to 29/10/2023  | Sample Receiving & I | Registration Date: 30/10/2023                   |
| Sample Condition: OK, Preserved & Sealed |                |                      | overnent of Vehicles &<br>urrounding Activities |
| Metrological Information                 | Temp: 27 °C    | R.Humidity: 65 %     | Barometric Pressure: 727 mmHg                   |

| Sample Description                                 |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C  | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |  |
| Test Start Date: 30/10/2023                        | Test End Date: 04/11/2023                        |  |  |  |
| Sampling Location: Kerandari Village – Buffer Zone |  |  |  |  |
| Predominant Wind Direction: From NW towards SE     | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 16.18  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 25.46  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 61.54  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.37  |  |

-END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000406F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000555  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/05                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ger            | neral Information                                |   |  |
|--|----------------|--|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air                      |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere                             | nce : BES/0064                                |  |
| Sampling Date: 11/10/2023 to 12/10/2023  |                | Sample Receiving & Registration Date: 14/10/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |                | 200  | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 27 °C    | R.Humidity: 67 %                                 | Barometric Pressure: 724 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: $5  ^{\circ}\text{C}$ Temperature at the time of Analysis: $25 \pm 2  ^{\circ}\text{C}$ |  |  |  |  |
| Test Start Date: 14/10/2023  | Test End Date: 28/10/2023                        |  |  |  |
| Sampling Location: Manatu village - Buffer Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 96.63  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 08.27  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part 23   | 100                    | 49.31  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | $\mu g/m^3$       | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.57  |  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B,29016/20/90/PCI-L of 18th November 2009)
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Tested by

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### BIOCRAT ENVIRONMENTAL SERVICES (BIOCRAT ENVIRONMENTAL LAB)

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#### TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FOR   | SECOND FORTNIGHT                         |  |  |
|--|--|--|--|
| Unique Lab Report No: TC1203923000000494F                            | Report Issue Date: 08/11/2023            |  |  |
| Job Card No : BES/0000673  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/13                        | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge          | neral Information                                 |   |  |
|--|-------------|---|---|--|
| Protocol: Ambient Air                    |             | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By: Manish Kumar & Team |             | Sampling Plan Refere                              | nce : BES/0077                                |  |
| Sampling Date: 28/10/2023 to 29/10/2023  |             | Sample Receiving & Registration Date : 30/10/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |             |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 27 °C | R.Humidity: 65 %                                  | Barometric Pressure: 727 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/10/2023  | Test End Date: 04/11/2023                        |  |  |  |
| Sampling Location: Manatu village - Buffer Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.77  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.52  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 49.78  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 18.34  |  |  |

---END OF REPORT----

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

81. Reported results are related only to the item tested.

This report is the property of laboratory & should not be used unless advised

Items tosted are as per the standard requirements.

sted by

04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

TEST REPORT

AMBIENT AIR QUALITY

(Pahra Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000407F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000556  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/06                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1601 14                                   | Ger          | neral Information           |   |  |
|---|--------------|-----------------------------|---|--|
| Protocol: Ambient Air                     |              | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manish Kumar & Team |              | Sampling Plan Refere        | nee: BES/0064                                 |  |
| Sampling Date: 11/10/2023 t               | o 12/10/2023 | Sample Receiving & I        | Registration Date: 14/10/2023                 |  |
| Sample Condition: OK, Preserved & Sealed  |              |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                  | Temp: 27 °C  | R.Humidity: 67 %            | Barometric Pressure: 724 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test End Date: 28/10/2023  |  |  |  |  |
|  |  |  |  |  |
| Customer Representative Name : Mr. Prakash Kumar   |  |  |  |  |
|  |  |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.92  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 05.82  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 48.41  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.03  |  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8-29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000495F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000674  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/14                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 159/                                     | Ge   | neral Information  |   |
|--|--|--|---|
| Protocol: Ambient Air                    |  | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manis              | h Kumar & Team   | Sampling Plan Refere   | nce : BES/0077                                |
| Sampling Date: 28/10/2023 t              | to 29/10/2023  | Sample Receiving & I   | Registration Date : 30/10/2023                |
| Sample Condition: OK, Preserved & Sealed |  |  | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 27 °C  | R.Humidity: 65 %   | Barometric Pressure: 727 mmHg                 |
|  | The state of the s | Charles to the control of the contro |   |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/10/2023  | Test End Date: 04/11/2023                        |  |  |  |
| Sampling Location: Pahra Village – Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |             |                             |                   |                        |        |  |  |
|----------|--|-------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit        | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³       | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.49  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | $\mu g/m^3$ | 24 Hours                    | IS 5182 Part-06   | 80                     | 05.60  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³       | 24 Hours                    | IS 5182 Part 23   | 100                    | 49.12  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³       | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.96  |  |  |

-END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
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TEST REPORT

AMBIENT AIR QUALITY

(Tarhesa Village)

| FIRST FORT   | NIGHT                                    |
|--|--|
| Unique Lab Report No: TC1203923000000405F                            | Report Issue Date: 08/11/2023            |
| Job Card No : BES/0000554  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/04                        | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.
Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7537                                      | Ger          | neral Information                  |   |  |
|---|--------------|------------------------------------|---|--|
| Protocol: Ambient Air                     |              | Type of Sample: Amb                | ient Air                                      |  |
| Sample Collected By : Manish Kumar & Team |              | Sampling Plan Reference : BES/0064 |   |  |
| Sampling Date: 10/10/2023 t               | o 11/10/2023 | Sample Receiving & I               | Registration Date: 14/10/2023                 |  |
| Sample Condition: OK, Preserved & Sealed  |              |                                    | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                  | Temp: 26 °C  | R.Humidity: 65 %                   | Barometric Pressure: 729 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 14/10/2023  | Test End Date: 28/10/2023                        |  |  |  |
| Sampling Location: Tarbesa Village - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Diaxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 05.93  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 10.64  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 58.31  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.13  |  |  |

---END OF REPORT---

 Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8-29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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02. This report is the property of laboratory & should not be used unless advised,

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarweshwari Nagur, Ithi Road, Bajra, P.O. - In ANC 7 July John John St. 4005

Email Id: - biocratenv@gmail.com. Mobile No. - 339019812, 8340466751, 9608708172



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### TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000493F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000672  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/12                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| van Jane June                            | Ge             | neral Information                                 |   |  |
|--|----------------|---|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere                              | nce : BES/0077                                |  |
| Sampling Date: 27/10/2023 to 28/10/2023  |                | Sample Receiving & Registration Date : 30/10/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |                |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 27 °C    | R.Humidity: 67 %                                  | Barometric Pressure: 726 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/10/2023  | Test End Date: 04/11/2023                        |  |  |  |
| Sampling Location: Tarbesa Village - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.19  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 09.16  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 59.17  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.94  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| FIRST FORT   | NIGHT                                    |
|--|--|
| Unique Lab Report No: TC1203923000000402F                            | Report Issue Date: 08/11/2023            |
| Job Card No : BES/0000551  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/01                        | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge             | neral Information           |  |  |
|--|----------------|-----------------------------|--|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air |  |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere        | nce : BES/0064                                 |  |
| Sampling Date: 10/10/2023 t              | to 11/10/2023  | Sample Receiving & I        | Registration Date: 14/10/2023                  |  |
| Sample Condition: OK, Preserved & Sealed |                |                             | ovement of Vehicles &<br>errounding Activities |  |
| Metrological Information                 | Temp: 26 °C    | R.Humidity: 65 %            | Barometric Pressure: 729 mmHg                  |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 14/10/2023 Test End Date: 28/10/2023 |  |
| Sampling Location: Baseria Village (NTPC Camp) - Cor- | e Zone   |
| Predominant Wind Direction: From NW towards SE        | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.61  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 13.14  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m <sup>1</sup> | 24 Hours                    | IS 5182 Part 23   | 100                    | 45.70  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.30  |  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
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# TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000490F                            | Report Issue Date: 08/11/2023            |  |
| Job Card No : BES/0000669  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/OCT/AAQ/09                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /[0/                                     | Ge             | neral Information           |   |  |
|--|----------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere        | nce: BES/0077                                 |  |
| Sampling Date: 27/10/2023 t              | o 28/10/2023   | Sample Receiving & I        | Registration Date : 30/10/2023                |  |
| Sample Condition: OK, Preserved & Sealed |                |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 27 °C    | R.Humidity: 67 %            | Barometric Pressure: 726 mmHg                 |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 30/10/2023                           | Test End Date: 04/11/2023                        |
| Sampling Location: Baseria Village (NTPC Camp) - Core | e Zone   |
| Predominant Wind Direction: From NW towards SE        | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.65  |  |  |  |
| 0.2      | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 12.29  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 46.12  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.85  |  |  |  |

-END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
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Format No: 7,8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000589F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/00000810   | Discipline : Chemical                    |  |
| Field Data Sheet Code; BES/BGR/KRD/NOV/AAQ/03                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ger            | neral Information    |   |
|--|----------------|----------------------|---|
| Protocol: Ambient Air                    |                | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere | nce : BES/0095                                |
| Sampling Date: 07/11/2023                | o 08/11/2023   | Sample Receiving & I | Registration Date: 11/11/2023                 |
| Sample Condition: OK, Preserved & Sealed |                |                      | ovement of Vehicles &<br>prounding Activities |
| Metrological Information                 | Temp: 25 °C    | R.Humidity: 59 %     | Barometric Pressure: 719 mmHg                 |

| Sample   | Description                                      |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 13/11/2023  | Test End Date: 27/11/2023                        |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.53  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.02  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part 23   | 100                    | 60.21  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.38  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of inburatory & should not be used unless 30

03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Irki Road, Rajra, P.O. Hatta: 41st - Rancha, Jharkhand, Pin -834005 Email Id: - biocratenv@gmail.com. Mobile No - 2369019812, 8340466751, 9668708172



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| SECOND FOR   | TNIGHT                                   |
|--|--|
| Unique Lab Report No: TC1203923000000634F                            | Report Issue Date: 07/12/2023            |
| Job Card No : BES/0000889  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/11                        | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /(13) /                                  | Ger            | neral Information    |   |
|--|----------------|----------------------|---|
| Protocol : Ambient Air                   |                | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere | nce: BES/0107                                 |
| Sampling Date: 27/11/2023 t              | o 28/11/2023   | Sample Receiving & I | Registration Date : 29/11/2023                |
| Sample Condition: OK, Preserved & Sealed |                |                      | ovement of Vehicles &<br>grounding Activities |
| Metrological Information                 | Temp: 26 °C    | R.Humidity: 63 %     | Barometric Pressure: 724 mmHg                 |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 29/11/2023                       | Test End Date: 05/12/2023                        |
| Sampling Location: Beagwari Nadi Tola - Core Zone | AV   |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.15  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.71  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 62.44  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.81  |  |  |

-END OF REPORT-

 NOFTHS: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8,29016/20/90/PCI-L of 18th November 2009)

· Declaration:

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04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Surveshwari Nagar, Itio Road, Bajra, P.O. Hertal, Dist - Ranchi, Barkhand, Pin -834005
Email Id: - biocrateny@email.com. Mobile No. - 7369019812, 8340406751, 9608708172



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Format No: 7,8F-04

# TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000588F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000809  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/02                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ger            | neral Information  |  |
|--|----------------|--|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambi   | ent Air  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere   | nee: BES/0095                                  |
| Sampling Date: 07/11/2023 t              | o 08/11/2023   | Sample Receiving & I   | Registration Date: 11/11/2023                  |
| Sample Condition: OK, Preserved & Sealed |                | With the Control of t | overnent of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 25 °C    | R.Humidity: 59 %   | Barometric Pressure: 719 mmHg                  |

| Sample   | Description                                      |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 13/11/2023  | Test End Date: 27/11/2023                        |  |  |  |
| Sampling Location: BGR Work Shop - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 09.84  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.94  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part 23   | 100                    | 62.82  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.34  |  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

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Authorized Signatory Technical Manager

Add: - Saveshwari Nagar, Itki Rond, Bajra, Public 1 - Ranchi, Jharkhand, Pin -834005 Email Id: - biocratesy@gmail.com. Mobile No - 7369019812, 8340466751, 9608708172



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(BGR Workshop)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000633F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000888  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/10                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                             | Ge              | neral Information    |   |
|-----------------------------|-----------------|----------------------|---|
| Protocol: Ambient Air       |                 | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manis | h Kumar & Team  | Sampling Plan Refere | nce : BES/0107                                |
| Sampling Date: 27/11/2023   | to 28/11/2023   | Sample Receiving & I | Registration Date : 29/11/2023                |
| Sample Condition: OK, Pre   | served & Sealed |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 26 °C     | R.Humidity: 63 %     | Barometric Pressure: 724 mmHg                 |

| Sample   | Description                                      |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 29/11/2023  | Test End Date: 05/12/2023                        |  |  |  |
| Sampling Location: BGR Workshop - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 10.31  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 17.07  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 63.55  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.92  |  |  |

---END OF REPORT---

 Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

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Authorized Signatory Technical Manager

Add: - Surveshwari Nagar, Itki Rond, Bajra, P. Sarveshwari Nagar, P. Sarveshwari Nagar,



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000593F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000814  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/07                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge             | neral Information           |   |  |
|--|----------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere        | nce : BES/0095                                |  |
| Sampling Date: 08/11/2023                | o 09/11/2023   | Sample Receiving & I        | Registration Date: 11/11/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |                |                             | ovement of Vehicles &<br>prounding Activities |  |
| Metrological Information                 | Temp: 26 °C    | R.Humidity: 61%             | Barometric Pressure: 722 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 13/11/2023  | Test End Date : 27/11/2023                       |  |  |  |  |
| Sampling Location: Jordag School - Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | <5.0   |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.95  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 44.37  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2-5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 16.24  |  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| SECOND FORTNIGHT   |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC1203923000000638F                            | Report Issue Date: 07/12/2023            |  |  |
| Job Card No : BES/0000893  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/15                        | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1537 1                                   | Ge             | neral Information           |   |  |
|--|----------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere        | nce : BES/0107                                |  |
| Sampling Date: 28/11/2023                | o 29/11/2023   | Sample Receiving & I        | Registration Date: 29/11/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |                |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 25 °C    | R.Humidity: 61 %            | Barometric Pressure: 726 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 29/11/2023  | Test End Date: 05/12/2023                        |  |  |  |  |
| Sampling Location: Jordag Village - Buffer Zone  |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | <5.0   |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.86  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 45.17  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 16.93  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

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Tested by

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000594F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000815  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/08                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ger            | neral Information                                 |   |  |
|--|----------------|---|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere                              | nce: BES/0095                                 |  |
| Sampling Date: 08/11/2023 to 09/11/2023  |                | Sample Receiving & Registration Date : 11/11/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |                |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 26 °C    | R.Humidity: 61 %                                  | Barometric Pressure: 722 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| rt Date : 13/11/2023 Test End Date : 27/11/2023  |  |  |  |  |  |
|  |  |  |  |  |  |
| Customer Representative Name : Mr. Prakash Kumar   |  |  |  |  |  |
|  |  |  |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 17.52  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 26.72  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 64.34  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.59  |  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCFL of 18th November 2009)

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Authorized Signatory Technical Manager

Add: - Surveshwari Nager, Itki Road, Hajra. Dist - Ranchi, Jharkhand. Pin -834005 Email Id: - biocrateriv@gmail.com. Mobile No - 2309019812, 8340466751, 9608708172



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Format No. 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000639F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000894  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/16                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge             | neral Information                                |   |  |
|--|----------------|--|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air                      |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere                             | nce : BES/0107                                |  |
| Sampling Date: 28/11/2023 to 29/11/2023  |                | Sample Receiving & Registration Date: 29/11/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |                |  | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 25 °C    | R.Humidity: 61 %                                 | Barometric Pressure: 726 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 29/11/2023  | Test End Date: 05/12/2023                        |  |  |  |
| Sampling Location: Kerandari Village - Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>5</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 18.16  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 27.03  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 65.83  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.19  |  |  |

-END OF REPORT-

 Norms: NAAQ5 (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

· Declaration: -

01. Reported results are related only to the item tested.

92. This report is the property of laboratory & should not be used up

03. Items tested are as per the standard requirements.

64. All parameters in this report conforms to the specific standard

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000591F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000812  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/05                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|   | Ger           | neral Information  |                               |  |
|---|---------------|--|-------------------------------|--|
| Protocol: Ambient Air                     |               | Type of Sample: Ambient Air  |                               |  |
| Sample Collected By : Manish Kumar & Team |               | Sampling Plan Refere   | nce : BES/0095                |  |
| Sampling Date: 08/11/2023 t               | to 09/11/2023 | Sample Receiving & I   | Registration Date: 11/11/2023 |  |
| Sample Condition: OK, Preserved & Sealed  |               | Sealed Emission Due to: Movement of Vehicles &<br>Surrounding Activities |                               |  |
| Metrological Information                  | Temp: 26 °C   | R.Humidity: 61 %   | Barometric Pressure: 722 mmHg |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 13/11/2023  | Test End Date: 27/11/2023                        |  |  |  |
| Sampling Location: Manatu Village - Buffer Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | 15 5182 Part-02   | 80                     | 07.90  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 08.50  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 52.21  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 19.98  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

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04. All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000636F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000891  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/13                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge             | neral Information           |   |  |
|--|----------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere        | nee : BES/0107                                |  |
| Sampling Date: 28/11/2023                | o 29/11/2023   | Sample Receiving & I        | Registration Date: 29/11/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |                |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 25 °C    | R.Humidity: 61 %            | Barometric Pressure: 726 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 29/11/2023  | Test End Date: 05/12/2023                        |  |  |  |  |
| Sampling Location: Manatu Village - Buffer Zone  |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.37  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 09.09  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 54.53  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 20.69  |

-END OF REPORT-

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

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03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Surveshwari Nagur, Iski Road, Bajru, P.O. Takel Ord - Hanchi, Jharkhand, Pin -834005 Email Id: - biocratziw@gimail.com. Mobile No. - 7369019812, 8340466751, 9608708172



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000592F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000813  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/06                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                             | Ger             | neral Information           |   |  |
|-----------------------------|-----------------|-----------------------------|---|--|
| Protocol : Ambient Air      |                 | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis | h Kumar & Team  | Sampling Plan Refere        | nce: BES/0095                                 |  |
| Sampling Date: 08/11/2023:  | o 09/11/2023    | Sample Receiving & I        | Registration Date : 11/11/2023                |  |
| Sample Condition: OK, Pre-  | served & Sealed |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information    | Temp; 26 °C     | R.Humidity: 61 %            | Barometric Pressure: 722 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 13/11/2023  | Test End Date: 27/11/2023                        |  |  |  |  |
| Sampling Location: Pahra Village – Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.61  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.37  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 53.87  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 18.62  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quelity Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

· Declaration: -

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Format No: 7.8F-04

#### TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| SECOND FORTNIGHT   |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC1203923000000637F                            | Report Issue Date: 07/12/2023            |  |  |
| Job Card No : BES/0000892  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/14                        | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge             | neral Information  |   |  |
|--|----------------|--|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air  |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere   | nce: BES/0107                                 |  |
| Sampling Date: 28/11/2023 to 29/11/2023  |                | Sample Receiving & Registration Date : 29/11/2023  |   |  |
| Sample Condition: OK, Preserved & Sealed |                | The state of the s | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 25 °C    | R.Humidity: 61 %   | Barometric Pressure: 726 mmHg                 |  |

| Sample Description  Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
| Sampling Location: Pahra Village - Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.92  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.45  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 54.61  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 19.22  |  |

---END OF REPORT----

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

01. Reported results are related only to the item tested.

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Items tested are as per the standard requirements.

All parameters in this report conforms to the specific standard





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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Tarbesa Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000590F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000811  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/04                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7424 / 1                                 | Ger            | neral Information           |   |  |
|--|----------------|-----------------------------|---|--|
| Protocol : Ambient Air                   |                | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis              | h Kumar & Teum | Sampling Plan Refere        | nce : BES/0095                                |  |
| Sampling Date: 07/11/2023                | to 08/11/2023  | Sample Receiving & I        | Registration Date: 11/11/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |                |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 25 °C    | R.Humidity: 59 %            | Barometric Pressure: 719 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Start Date: 13/11/2023 Test End Date: 27/11/2023   |  |  |  |  |
|  |  |  |  |  |
| Customer Representative Name : Mr. Prakash Kumar   |  |  |  |  |
|  |  |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.53  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 09.90  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 64.87  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.41  |  |

---END OF REPORT---

 Nerms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 6.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless

03. Items tested are as per the standard requirements.

red by

04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwuri Nagar, Itki Road, Bajra, P. Lei Dist - Ranchi, Jharkhand, Pin -834005
Email Id: - biocratenvii/umail.com. Mobile No. - 7300019812, 8340466751, 9608708172



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000635F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000890  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/12                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test ; Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge             | neral Information           |   |  |
|--|----------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere        | nce : BES/0107                                |  |
| Sampling Date: 27/11/2023                | o 28/11/2023   | Sample Receiving & F        | Registration Date: 29/11/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |                |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 26 °C    | R.Humidity: 63 %            | Barometric Pressure: 724 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 29/11/2023  | Test End Date: 05/12/2023                        |  |  |  |
| Sampling Location: Tarhesa Village - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.97  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | 15 5182 Part-06   | 80                     | 10.04  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 66.00  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 32.21  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

· Declaration: -

01. Reported results are related only to the item tested.

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Tested by

04. All parameters in this report conforms to the specific standar



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Certified by: 18O 9001;2015(QMS) & ISO 45001;2018(OHSAS) ...



TEST REPORT

AMBIENT AIR QUALITY

(Baseria Village)

Format No: 7.8F-04

| FIRST FORTNIGHT  |  |  |  |
|--|--|--|--|
| Unique Lub Report No: TC1203923000000587F                            | Report Issue Date: 07/12/2023            |  |  |
| Job Card No : BES/0000808  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/NOV/AAQ/01                        | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7 (C.S. /                   | Ger             | neral Information           |   |  |
|-----------------------------|-----------------|-----------------------------|---|--|
| Protocol: Ambient Air       |                 | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis | h Kumar & Team  | Sampling Plan Refere        | nce: BES/0095                                 |  |
| Sampling Date: 07/11/2023 t | o 08/11/2023    | Sample Receiving & I        | Registration Date: 11/11/2023                 |  |
| Sample Condition: OK, Pre-  | served & Sealed |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information    | Temp: 25 °C     | R.Humidity: 59 %            | Barometric Pressure: 719 mmHg                 |  |

| Sample   | Description                                      |
|--|--|
| Sample Temperature at the time of receiving: 5 °C    | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 13/11/2023                          | Test End Date: 27/11/2023                        |
| Sampling Location: Baseria Village (NTPC Camp) - Cor | e Zone   |
| Predominant Wind Direction: From NW towards SE       | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.90  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 13.46  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 49.68  |
| 04       | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 18.33  |

-END OF REPORT-

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

61. Reported results are related only to the item tested.

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04. All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lub Report No: TC1203923000000632F                            | Report Issue Date: 07/12/2023            |  |
| Job Card No : BES/0000887  | Discipline : Chemical                    |  |
| Field Data Sheet Code; BES/BGR/KRD/NOV/AAQ/09                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /63/                                     | Ge             | neral Information                                 |   |  |
|--|----------------|---|---|--|
| Protocol: Ambient Air                    |                | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By : Manis              | h Kumar & Team | Sampling Plan Refere                              | nce : BES/0107                                |  |
| Sampling Date: 27/11/2023 to 28/11/2023  |                | Sample Receiving & Registration Date : 29/11/2023 |   |  |
| Sample Condition: OK, Preserved & Scaled |                |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 26 °C    | R.Humidity: 63 %                                  | Barometric Pressure: 724 mmHg                 |  |

| Sample  | Description                                      |  |
|---|--|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis: 25 ± 2 °C   |  |
| Test Start Date: 29/11/2023                           | Test End Date: 05/12/2023                        |  |
| Sampling Location: Baseria Village (NTPC Camp) - Cor- | e Zone   |  |
| Predominant Wind Direction: From NW towards SE        | Customer Representative Name : Mr. Prakash Kumar |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.16  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 13.96  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 50.21  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2-5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 19,93  |  |

-END OF REPORT-

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

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14. All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000752F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001061  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/02                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                             | Ge              | neral Information           |   |  |
|-----------------------------|-----------------|-----------------------------|---|--|
| Protocol: Ambient Air       |                 | Type of Sample: Ambient Air |   |  |
| Sample Collected By: Nilesh | Kumar & Team    | Sampling Plan Refere        | nce : BES/0128                                |  |
| Sampling Date: 11/12/2023   | o 12/12/2023    | Sample Receiving & I        | Registration Date: 15/12/2023                 |  |
| Sample Condition: OK, Pre-  | served & Sealed |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information    | Temp: 23 °C     | R.Humidity: 61 %            | Barometric Pressure: 721 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/12/2023  | Test End Date: 30/12/2023                        |  |  |  |
| Sampling Location: BGR Work Shop - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 09.12  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.79  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 60.87  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.29  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(BGR Workshop)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000814F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001174  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/10                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge            | neral Information           |   |  |
|--|---------------|-----------------------------|---|--|
| Protocol : Ambient Air                   |               | Type of Sample: Ambient Air |   |  |
| Sample Collected By: Nilesh              | Kumar & Team  | Sampling Plan Refere        | nce : BES/0149                                |  |
| Sampling Date: 27/12/2023                | to 28/12/2023 | Sample Receiving & I        | Registration Date: 30/12/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |               |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 20 °C   | R.Humidity: 68 %            | Barometric Pressure: 729 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/12/2023 Test End Date: 06/01/2024  |  |  |  |  |
| Sampling Location: BGR Workshop - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   Customer Representative Name: Mr. Prakash Kumar |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash F |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 10.82  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 17.49  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 64.55  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.00  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000757F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001066  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/07                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|   | Ge          | neral Information  |   |  |
|---|-------------|--|---|--|
| Protocol: Ambient Air                     |             | Type of Sample: Ambient Air  |   |  |
| Sample Collected By : Nilesh Kumar & Team |             | Sampling Plan Reference : BES/0128 Sample Receiving & Registration Date : 15/12/2023 |   |  |
| Sampling Date: 12/12/2023 to 13/12/2023   |             |  |   |  |
| Sample Condition: OK, Preserved & Sealed  |             | 1.00   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                  | Temp: 21 °C | R.Humidity: 63 %   | Barometric Pressure: 725 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/12/2023  | Test End Date : 30/12/2023                       |  |  |  |
| Sampling Location: Jordag School - Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | <5.0   |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 06.37  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 41.88  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 15.52  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000819F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001179  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/15                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 16.1                                     | Ge           | neral Information           |  |  |
|--|--------------|-----------------------------|--|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air |  |  |
| Sample Collected By: Nilesh              | Kumar & Team | Sampling Plan Refere        | nce : BES/0149                                 |  |
| Sampling Date: 28/12/2023                | o 29/12/2023 | Sample Receiving & I        | Registration Date: 30/12/2023                  |  |
| Sample Condition: OK, Preserved & Sealed |              |                             | ovement of Vehicles &<br>errounding Activities |  |
| Metrological Information                 | Temp: 21 °C  | R.Humidity: 66 %            | Barometric Pressure: 725 mmHg                  |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/12/2023 Test End Date: 06/01/2024  |  |  |  |  |
| Sampling Location: Jordag Village - Buffer Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | <5.0   |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.86  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 43.82  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.12  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000758F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001067  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/08                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information    |   |
|--|--------------|----------------------|---|
| Protocol: Ambient Air                    |              | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere | nce : BES/0128                                |
| Sampling Date: 12/12/2023                | o 13/12/2023 | Sample Receiving & I | Registration Date: 15/12/2023                 |
| Sample Condition: OK, Preserved & Sealed |              | 0.00                 | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 21 °C  | R.Humidity: 63 %     | Barometric Pressure: 725 mmHg                 |
|  |              |                      |   |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/12/2023 Test End Date: 30/12/2023  |  |  |  |  |
| Sampling Location: Kerandari Village – Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name ; Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 17.21  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 25,85  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 62.33  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.85  |  |  |  |

---END OF REPORT---

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPC8 Notification No B.29016/20/90/PCI-L of
18th November 2009)

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Format No: 7,87-04

# TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000820F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001180  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/16                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge          | neral Information                                 |   |  |
|--|-------------|---|---|--|
| Protocol: Ambient Air                    |             | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By: Nilesh Kumar & Team |             | Sampling Plan Reference : BES/0149                |   |  |
| Sampling Date: 28/12/2023 to 29/12/2023  |             | Sample Receiving & Registration Date : 30/12/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |             |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 21 °C | R.Humidity: 66 %                                  | Barometric Pressure: 725 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/12/2023  | Test End Date: 06/01/2024                        |  |  |  |
| Sampling Location: Kerandari Village – Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 18.88  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 26.61  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 63.42  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.93  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
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  - 03. Items testest the as per the standard requirements.
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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000755F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001064  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/05                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information    |   |
|--|--------------|----------------------|---|
| Protocol: Ambient Air                    |              | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere | ace: BES/0128                                 |
| Sampling Date: 12/12/2023                | o 13/12/2023 | Sample Receiving & F | Registration Date: 15/12/2023                 |
| Sample Condition: OK, Preserved & Sealed |              |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 21 °C  | R.Humidity: 63 %     | Barometric Pressure: 725 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/12/2023  | Test End Date: 30/12/2023                        |  |  |  |
| Sampling Location: Manatu Village - Buffer Zone  | 20   |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 06,90  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 08.45  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part 23   | 100                    | 49.81  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 19.25  |  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8,29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

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03. Items tested, are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000817F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001177  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/13                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /如金/                                     | Ge           | neral Information                                 |   |  |
|--|--------------|---|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Amb                               | ent Air                                       |  |
| Sample Collected By: Nilesh              | Kumar & Team | Sampling Plan Refere                              | nce : BES/0149                                |  |
| Sampling Date: 28/12/2023 to 29/12/2023  |              | Sample Receiving & Registration Date : 30/12/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |              |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 21 °C  | R.Humidity: 66 %                                  | Barometric Pressure: 725 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test End Date: 06/01/2024  |  |  |  |  |  |
|  |  |  |  |  |  |
| Customer Representative Name : Mr. Prakash Kumar   |  |  |  |  |  |
|  |  |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.80  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 10.42  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 52.76  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 21.85  |  |  |

---END OF REPORT----

- Norms: NAAQ5 (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 62. This report is the property of laboratory & should not be used unless advised,
  - 03. Items tested are as per the standard requirements.
  - All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000756F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001065  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/06                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge            | neral Information    |   |
|--|---------------|----------------------|---|
| Protocol: Ambient Air                    |               | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By : Nilesh             | Kumar & Team  | Sampling Plan Refere | nce : BES/0128                                |
| Sampling Date: 12/12/2023                | to 13/12/2023 | Sample Receiving & I | Registration Date: 15/12/2023                 |
| Sample Condition: OK, Preserved & Sealed |               |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 21 °C   | R.Humidity: 63 %     | Barometric Pressure: 725 mmHg                 |
|  |               |                      |   |

| Sample   | Description                                      |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving : $5  ^{\circ}\text{C}$ Temperature at the time of Analysis : $25 \pm 2  ^{\circ}\text{C}$ |  |  |  |  |  |
| Test Start Date: 15/12/2023  | Test End Date: 30/12/2023                        |  |  |  |  |
| Sampling Location: Pahra Village – Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.27  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 05.58  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>20</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 48.98  |
| 04       | Fine Particulate Matter<br>(PM <sub>25</sub> )                 | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 17.63  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/9Q/PCI-L of 18th November 2009)

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# TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000818F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001178  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/14                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information                                 |   |
|--|--------------|---|---|
| Protocol: Ambient Air                    |              | Type of Sample: Amb                               | ient Air                                      |
| Sample Collected By: Nilesh              | Kumar & Team | Sampling Plan Refere                              | nce : BES/0149                                |
| Sampling Date: 28/12/2023 to 29/12/2023  |              | Sample Receiving & Registration Date : 30/12/2023 |   |
| Sample Condition: OK, Preserved & Sealed |              |   | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 21 °C  | R.Humidity: 66 %                                  | Barometric Pressure: 725 mmHg                 |
|  |              |   |   |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test End Date : 06/01/2024   |  |  |  |  |  |
|  |  |  |  |  |  |
| Customer Representative Name : Mr. Prakash Kumar   |  |  |  |  |  |
|  |  |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.31  |  |
| 0.2             | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.62  |  |
| 0.3             | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 51.85  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 19.61  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| FIRST FORTNIGHT  |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC1203923000000754F                            | Report Issue Date: 09/01/2024            |  |  |
| Job Card No : BES/0001063  | Discipline : Chemical                    |  |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/04                        | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information                                |   |  |
|--|--------------|--|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air                      |   |  |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere                             | nce : BES/0128                                |  |
| Sampling Date: 11/12/2023 to 12/12/2023  |              | Sample Receiving & Registration Date: 15/12/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |              |  | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 23 °C  | R.Humidity: 61 %                                 | Barometric Pressure: 721 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date : 15/12/2023   | Test End Date: 30/12/2023                        |  |  |  |
| Sampling Location: Tarhesa Village - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.53  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | 15 5182 Part-06   | 80                     | 09.33  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 63.81  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 30.74  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
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Formet No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000816F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001176  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/12                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information                                 |   |  |
|--|--------------|---|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air                       |   |  |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere                              | nce : BES/0149                                |  |
| Sampling Date: 27/12/2023 to 28/12/2023  |              | Sample Receiving & Registration Date : 30/12/2023 |   |  |
| Sample Condition: OK, Preserved & Sealed |              |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information Temp: 20 °C     |              | R.Humidity: 68 %                                  | Barometric Pressure: 729 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/12/2023  | Test End Date: 06/01/2024                        |  |  |  |
| Sampling Location: Tarbesa Village - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kuman |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.41  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 11.33  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 67.84  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 33.45  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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# TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000751F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001060  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/01                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7((3) 7 1                                | Ge            | neral Information           |   |  |
|--|---------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |               | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Nilesh             | Kumar & Team  | Sampling Plan Refere        | nce : BES/0128                                |  |
| Sampling Date: 11/12/2023                | to 12/12/2023 | Sample Receiving & I        | Registration Date: 15/12/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |               | 20/8                        | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 23 °C   | R.Humidity: 61 %            | Barometric Pressure: 721 mmHg                 |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis ; 25 ± 2 °C  |
| Test Start Date: 15/12/2023                           | Test End Date: 30/12/2023                        |
| Sampling Location: Baseria Village (NTPC Camp) - Core | e Zone   |
| Predominant Wind Direction: From NW towards SE        | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.88  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 11.70  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part 23   | 100                    | 48.42  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 18.17  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000813F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001173  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/09                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information    |   |
|--|--------------|----------------------|---|
| Protocol : Ambient Air                   |              | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere | nce: BES/0149                                 |
| Sampling Date: 27/12/2023                | o 28/12/2023 | Sample Receiving & I | Registration Date: 30/12/2023                 |
| Sample Condition: OK, Preserved & Sealed |              |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 20 °C  | R.Humidity: 68 %     | Barometric Pressure: 729 mmHg                 |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 30/12/2023                           | Test End Date: 06/01/2024                        |
| Sampling Location: Baseria Village (NTPC Camp) - Core | e Zone   |
| Predominant Wind Direction: From NW towards SE        | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.62  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 12.35  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 51.63  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 20.35  |  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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Format No: 7.8F-04

TEST REPORT

(Bengwari Nadi Tola)

AMBIENT AIR QUALITY

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000753F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/00001062   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/03                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information  |   |  |
|--|--------------|--|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Ambient Air  |   |  |
| Sample Collected By: Nilesh              | Kumar & Team | Sampling Plan Refere   | nce: BES/0128                                 |  |
| Sampling Date: 11/12/2023                | o 12/12/2023 | Sample Receiving & F   | Registration Date: 15/12/2023                 |  |
| Sample Condition: OK, Preserved & Sealed |              | The second secon | ovement of Vehicles &<br>grounding Activities |  |
| Metrological Information                 | Temp: 23 °C  | R.Humidity: 61 %   | Barometric Pressure: 721 mmHg                 |  |

| Sample   | Description                                      |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/12/2023  | Test End Date: 30/12/2023                        |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  | 120000000000000000000000000000000000000          |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 06.37  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 7.00   |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 59.45  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 27.38  |  |  |

---END OF REPORT----

Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

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03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000815F                            | Report Issue Date: 09/01/2024            |  |
| Job Card No : BES/0001175  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/DEC/AAQ/11                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ge           | neral Information                                 |   |  |
|--|--------------|---|---|--|
| Protocol: Ambient Air                    |              | Type of Sample: Amb                               | ent Air                                       |  |
| Sample Collected By : Nilesh             | Kumar & Team | Sampling Plan Refere                              | nce : BES/0149                                |  |
| Sampling Date: 27/11/2023 to 28/11/2023  |              | Sample Receiving & Registration Date : 30/12/2023 |   |  |
| Sample Condition: OK, Preserved & Scaled |              |   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 20 °C  | R.Humidity: 68 %                                  | Barometric Pressure: 729 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/12/2023  | Test End Date : 06/01/2024                       |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.82  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 08.56  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 63.71  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.96  |  |  |

---END OF REPORT---

 Norms: NAAQ5 (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000883F                            | Report Issue Date: 07/02/2024            |  |
| Job Card No: BES/0001287   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/01                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| Gen                                      | eral Information                                      |  |
|--|---|--|
|  | Type of Sample: Ambi                                  | ent Air  |
| h Kr.Singh & Team                        | Sampling Plan Refere                                  | nce : BES/0170   |
| o 10/01/2024                             | Sample Receiving & F                                  | Registration Date: 13/01/2024  |
| Sample Condition: OK, Preserved & Sealed |   | ovement of Vehicles &<br>rrounding Activities                              |
| Temp: 21 °C                              | R.Humidity: 65 %                                      | Barometric Pressure: 726 mmHg  |
|  | h Kr.Singh & Team<br>to 10/01/2024<br>served & Sealed | o 10/01/2024 Sample Receiving & Families France Scaled Emission Due to: Mo |

| Sample   | Description                                      |
|--|--|
| Sample Temperature at the time of receiving: 5 °C    | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 13/01/2024                          | Test End Date : 27/01/2024                       |
| Sampling Location: Baseria Village (NTPC Camp) - Cor | e Zone   |
| Predominant Wind Direction: From NW towards SE       | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (50 <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 09.60  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 13.65  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 64.28  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 23.34  |  |  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
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Pested by

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000884F                            | Report Issue Date: 07/02/2024            |  |
| Job Card No : BES/0001288  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/02                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 78.37 8                                  | Ger                | neral Information                                 |  |
|--|--------------------|---|--|
| Protocol : Ambient Air                   |                    | Type of Sample: Ambie                             | ent Air                                |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Referen                             | nce: BES/0170                          |
| Sampling Date: 09/01/2024 to 10/01/2024  |                    | Sample Receiving & Registration Date : 13/01/2024 |  |
| Sample Condition: OK, Preserved & Sealed |                    | Emission Due to: Move<br>Surre                    | ement of Vehicle<br>bunding Activities |
| Metrological Information                 | Temp: 21 °C        | R.Humidity: 65%                                   | Barometric Pressure: 726 mmHg          |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 13/01/2024  | Test End Date: 27/01/2024                        |  |  |  |  |
| Sampling Location: BGR Work Shop - Core Zone   |  |  |  |  |  |
| Predominant Wind Direction : From NW towards SE  | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 10.28  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 18.47  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 69.88  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 30.21  |  |  |

---END OF REPORT----

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
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Tested by

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000885F                            | Report Issue Date: 07/02/2024            |  |
| Job Card No : BES/00001289   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/03                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                | eral Information     | J. 1 100 J. 100 |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambi | ent Air   |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0170  |
| Sampling Date: 09/01/2024 t              | o 10/01/2024       | Sample Receiving & I | Registration Date: 13/01/2024   |
| Sample Condition: OK, Preserved & Sealed |                    |                      | ovement of Vehicles &<br>rrounding Activities   |
| Metrological Information                 | Temp: 21 °C        | R.Humidity: 65 %     | Barometric Pressure; 726 mmHg   |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 13/01/2024  | Test End Date: 27/01/2024                        |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 09.62  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 10.80  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 76.61  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 39.52  |  |  |

---END OF REPORT----

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
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Tested by

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000886F                            | Report Issue Date: 07/02/2024            |  |
| Job Card No : BES/0001290  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/04                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                             | Gen                | eral Information     |   |
|-----------------------------|--------------------|----------------------|---|
| Protocol ; Ambient Air      |                    | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere | nce: BES/0170                                 |
| Sampling Date: 09/01/20241  | to 10/01/2024      | Sample Receiving & F | Registration Date: 13/01/2024                 |
| Sample Condition: OK, Pre   | served & Sealed    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 21 °C        | R.Humidity: 65 %     | Barometric Pressure: 726 mmHg                 |

| Sample   | Description  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 13/01/2024  | Test End Date: 27/01/2024  |  |  |  |
| Sampling Location: Tarhesa Village - Core Zone   | Laboration State of the Control of t |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar   |  |  |  |
| Sampling Location: Tarhesa Village – Core Zone Predominant Wind Direction: From NW towards SE    |  |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.48  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 12.70  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 69.81  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 35.33  |  |  |

---END OF REPORT---

NOTIBS: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

#### Declaration: -

- 61. Reported results are related only to the item tested.
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- 63. Items tested are as per the standard requirements.
- 04. All paramèters in this report conforms to the specific standard.





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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000887F                            | Report Issue Date: 07/02/2024            |  |
| Job Card No : BES/0001291  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/05                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7637                                     | Gen                | eral Information            |   |  |
|--|--------------------|-----------------------------|---|--|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Refere        | nce : BES/0170                                |  |
| Sampling Date: 10/01/2024 t              | o 11/01/2024       | Sample Receiving & F        | Registration Date: 13/01/2024                 |  |
| Sample Condition: OK, Preserved & Sealed |                    | 100                         | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 22 °C        | R.Humidity: 67%             | Barometric Pressure: 728 mmHg                 |  |

| Sample Description                                |  |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |  |
| Test Start Date : 13/01/2024                      | Test End Date: 27/01/2024                        |  |  |
| Sampling Location: Manatu Village - Buffer Zone   |  |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.38  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 09.41  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 55.79  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.61  |  |  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
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  - 93. Items tested are as per the standard requirements.
  - All parameters in this report conforms to the specific standard.



Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Itki Rood, Bajra, P.O. 175 Carchi, Backhand, Pin -834005 Email Id: - biocrateny/Figmail.com. Mobile No. - 7369019812, 8340466751, 9608208172



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000888F                            | Report Issue Date: 07/02/2024            |  |
| Job Card No : BES/0001292  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/06                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| ver and discovery selections.            | Gen                | eral Information                                 |   |  |
|--|--------------------|--|---|--|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambi                             | ent Air                                       |  |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Refere                             | nce: BES/0170                                 |  |
| Sampling Date: 10/01/2024 to 11/01/2024  |                    | Sample Receiving & Registration Date: 13/01/2024 |   |  |
| Sample Condition: OK, Preserved & Sealed |                    |  | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 22 °C        | R.Humidity: 67 %                                 | Barometric Pressure: 728 mmHg                 |  |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 13/01/2024  | Test End Date: 27/01/2024                        |  |  |  |  |
| Sampling Location: Pahra Village - Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 07.88  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 08.10  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 57.27  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 21.54  |  |  |

---END OF REPORT---

- NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000000889F                            | Report Issue Date: 07/02/2024            |  |
| Job Card No : BES/0001293  | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/07                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                | eral Information                                 |   |  |
|--|--------------------|--|---|--|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambi                             | ent Air                                       |  |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Refere                             | nce : BES/0170                                |  |
| Sampling Date: 10/01/2024 to 11/01/2024  |                    | Sample Receiving & Registration Date: 13/01/2024 |   |  |
| Sample Condition: OK, Preserved & Scaled |                    | 1000   | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 22 °C        | R.Humidity: 67 %                                 | Barometric Pressure: 728 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test End Date: 27/01/2024  |  |  |  |  |
|  |  |  |  |  |
| Customer Representative Name : Mr. Prakash Kumar   |  |  |  |  |
|  |  |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | <5.0   |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 07.83  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 47.65  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 19.24  |  |  |

---END OF REPORT---

NOPMS: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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63. Items tested are as per the standard requirements.

04. All purapreters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Irki Roud, Hajra, P. Pontin Del Anochi, Jharkhund, Pin -834005 Email Id: - bjocratenvid-pmall.com. Mobile No. 7565019812, 8340466751, 9608708172



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Jharkhand State Pollution Control Board (JSPCB)
Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)

# TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| FIRST FORT   | FIRST FORTNIGHT                          |  |  |
|--|--|--|--|
| Unique Lab Report No: TC1203923000000890F                            | Report Issue Date: 07/02/2024            |  |  |
| Job Card No : BES/0001294  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/08                        | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0170                                |
| Sampling Date: 10/01/2024                | o 11/01/2024       | Sample Receiving & I | Registration Date : 13/01/2024.               |
| Sample Condition: OK, Preserved & Sealed |                    | 114.4                | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 22 °C        | R.Humidity: 67 %     | Barometric Pressure: 728 mmHg                 |

| Sample Description   |  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 13/01/2024  | Test End Date : 27/01/2024                       |  |  |  |  |
| Sampling Location: Kerandari Village – Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 18.90  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 27,49  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 66.53  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.28  |  |  |  |

---END OF REPORT---

 Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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04. All parameters in this report conforms to the specific standard.

SOCR41

Authorized Signatory Technical Manager

Add: - Sarveshvari Nagar, Itki Road, Bajra, P.O. - CANCE Berichi, Burkhand, Pin -834005 Email Id: - biocrateriv@gmail.com, Mobile No. - 7559019812, 8340466751, 9608708172



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000000999F                             | Report Issue Date: 07/02/2024            |
| Job Card No : BES/0001445   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/09                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7637                                     | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere |   |
| Sampling Date: 27/01/2024:               |                    | Sample Receiving & F | tegistration Date : 30/01/2024                |
| Sample Condition: OK, Preserved & Sealed |                    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 22 °C        | R.Humidity: 69 %     | Barometric Pressure: 729 mmHg                 |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis: 25 ± 2 ℃    |
| Test Start Date: 30/01/2024 Test End Date: 05/02/2024 |  |
| Sampling Location: Baseria Village (NTPC Camp) - Core | e Zone   |
| Predominant Wind Direction: From NW towards SE        | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 10.24  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 14.57  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 73.41  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 28.69  |  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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Items fested are as per the standard requirements.

Tested by

All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(BGR Workshop)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000001000F                             | Report Issue Date: 07/02/2024            |
| Job Card No : BES/0001446   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/10                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| - 711.4.7. 9                                  | Gen  | eral Information                   |   |  |
|---|--|------------------------------------|---|--|
| Protocol : Ambient Air                        |  | Type of Sample: Ambi               |   |  |
| Sample Collected By : Manish kr. Singh & Team |  | Sampling Plan Reference : BES/0187 |   |  |
| Sampling Date: 27/01/2024 t                   |  | Sample Receiving & F               | tegistration Date : 30/01/2024                |  |
| Sample Condition: OK, Pre-                    | Control of the Contro | Emission Due to: Mo                | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                      | Temp: 22 °C  | R.Humidity: 69 %                   | Barometric Pressure: 729 mmHg                 |  |

| Sample Description                                |  |  |  |  |
|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |  |  |  |
| Test Start Date: 30/01/2024                       | Test End Date: 05/02/2024                        |  |  |  |
| Sampling Location: BGR Workshop - Core Zone       |  |  |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 11.61  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>2</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 19.56  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 78.24  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 35.59  |  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

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04. All parameters in this report conforms to the specific standard.



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Format No: 7,85-04

# TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000001001F                             | Report Issue Date: 07/02/2024            |
| Job Card No : BES/0001447   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/11                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 78.2.7                       | Gen                | eral Information     |  |
|------------------------------|--------------------|----------------------|--|
| Protocol: Ambient Air        |                    | Type of Sample: Ambi |  |
| Sample Collected By : Manis  | h kr. Singh & Team | Sampling Plan Refere |  |
| Sampling Date : 27/01/2024 t |                    |                      | Registration Date: 30/01/2024                  |
| Sample Condition: OK, Pre-   |                    | Emission Due to: Mo  | overnent of Vehicles &<br>rrounding Activities |
| Metrological Information     | Temp: 22 °C        | R.Humidity: 69 %     | Barometric Pressure: 729 mmHg                  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 30/01/2024                       | Test End Date: 05/02/2024                        |
| Sampling Location: Bengwari Nadi Tola - Core Zone |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 10.54  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 11.84  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>50</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 88.82  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 46.21  |  |  |

---END OF REPORT---

- NAAOS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - This report is the property of inhoratory & should not be used unless advised
  - 03. Items texted are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Sagar, Itki Road, Bajra, P.O. MANG Machi, Jharkhand, Pin -834005 Email Id: - biocratessyngmail.com Mahile No. - 7800119812, 8340466751, 9608708172



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Format No: 7,8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000001002F                             | Report Issue Date: 07/02/2024            |
| Job Card No : BES/0001448   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/12                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 76.3 /                      | Gen  | eral Information          |   |
|-----------------------------|--|---------------------------|---|
| Protocol: Ambient Air       |  | Type of Sample: Ambi      | ent Air                                       |
| Sample Collected By : Manis | h kr. Singh & Team   | Sampling Plan Refere      |   |
| Sampling Date: 27/01/20241  |  | Sample Receiving & F      | tegistration Date : 30/01/2024                |
| Sample Condition: OK, Pre-  | AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED I | Emission Due to: Me<br>Su | ovement of Vehicles &<br>crounding Activities |
| Metrological Information    | Temp: 22 °C  | R.Humidity: 69 %          | Barometric Pressure: 729 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/01/2024  | Test End Date: 05/02/2024                        |  |  |  |
| Sampling Location: Tarhesa Village - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.63  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 13.70  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 78.26  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 39.18  |  |  |  |

---END OF REPORT----

- NOTIS: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- · Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised
  - 63. Items tosted are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Itki Road, Bajra, P.O. 1500 Med. Renchi, Barkhand, Pin.-834005 Email Id: - biocratenvizigmail.com. Mobile No. - 7509019812, 8340466751, 9608708172



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000001003F                             | Report Issue Date: 07/02/2024            |
| Job Card No : BES/0001449   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/13                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test ; Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 75.5.7                                   | Ger                | eral Information     | 1 2 2 2                                       |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    | 130 T (A)          | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere |   |
| Sampling Date : 28/01/2024 t             |                    | Sample Receiving & F | Registration Date : 30/01/2024                |
| Sample Condition: OK, Preserved & Scaled |                    | Emission Due to: Mo  | ovement of Vehicles &<br>erounding Activities |
| Metrological Information                 | Temp: 21 °C        | R.Humidity: 65 %     | Barometric Pressure: 727 mmHg                 |

| Sample  | Description                                      |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |  |
| Test Start Date : 30/01/2024                      | Test End Date: 05/02/2024                        |  |  |
| Sampling Location: Manatu Village - Buffer Zone   |  |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 09,60  |  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 10.80  |  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 64.34  |  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 30.50  |  |  |  |  |

---END OF REPORT---

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

Add: - Sarveshwari Nagur, Ilki Road, Bajra, P.O. - New ANO Sechi, Jharkhand, Pin -834005.

Email Id: - biocratenvicemuil.com. Mobile No. - 73690179812, 8340466751, 9608708172.



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000001004F                             | Report Issue Date: 07/02/2024            |
| Job Card No : BES/0001450   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/14                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7837 8                       | Gen  | eral Information     | V 1993  |
|------------------------------|--|----------------------|---|
| Protocol : Ambient Air       |  | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis  | h kr. Singh & Team   | Sampling Plan Refere |   |
| Sampling Date : 28/01/2024 t | THE RESERVE TO SECURITION OF THE PERSON OF T | Sample Receiving & F | Registration Date : 30/01/2024                |
| Sample Condition: OK, Pre-   | The second secon |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information     | Temp: 21 °C  | R.Humidity: 65 %     | Barometric Pressure: 727 mmHg                 |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 30/01/2024                       | Test End Date: 05/02/2024                        |
| Sampling Location: Pahra Village - Buffer Zone    |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          | Analysis Result  |       |                             |                   |                        |        |  |  |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.18  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 09.96  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 65.17  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.43  |  |  |  |

---END OF REPORT----

 Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)

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03. Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.

Xuthorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Bki Road, Bajra, P.O. O'ANOS: Junchi, Barkhand, Pin -834005

Email Id: - hiocrateny argmatl.com, Madule No. - 10907 9812, 8340466751, 9608708172



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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000001005F                             | Report Issue Date: 07/02/2024            |
| Job Card No : BES/0001451   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/15                         | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 15 1 / 6                                      | Gen         | eral Information     |   |
|---|-------------|----------------------|---|
| Protocol: Ambient Air                         |             | Type of Sample: Ambi |   |
| Sample Collected By : Manish kr. Singh & Team |             | Sampling Plan Refere |   |
| Sampling Date: 28/01/2024 t                   |             | Sample Receiving & F | Registration Date: 30/01/2024                 |
| Sample Condition: OK, Preserved & Scaled      |             | Emission Due to: Mo  | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                      | Temp: 21 °C | R.Humidity: 65 %     | Barometric Pressure: 727 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/01/2024  | Test End Date: 05/02/2024                        |  |  |  |
| Sampling Location: Jordag Village - Buffer Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | <5.0   |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | 15 5182 Part-06   | 80                     | 08.69  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 55.87  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 22.41  |  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

Kuthorized Signatory Technical Manager

Add: - Sarveshwari Nagar, Itki Road, Bajra, P.O. Basel, Banchi, Jharkhand, Pin -834005 Email Id: - biocrateny@gmail.com. Mobile No - 7369019812, 8340466751, 9608708172



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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)



Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| SECOND FOR  | SECOND FORTNIGHT                         |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001006F                             | Report Issue Date: 07/02/2024            |  |
| Job Card No : BES/0001452   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/JAN/AAQ/16                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 76.17.18                    | Gen                | eral Information     |   |
|-----------------------------|--------------------|----------------------|---|
| Protocol: Ambient Air       |                    | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis | h kr. Singh & Team | Sampling Plan Refere |   |
| Sampling Date: 28/01/20241  |                    | Sample Receiving & I | tegistration Date : 30/01/2024                |
| Sample Condition: OK, Pre-  |                    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 21 °C        | R.Humidity: 65 %     | Barometric Pressure: 727 mmHg                 |

| Sample Description                                 |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C  | Temperature at the time of Analysis: 25 ± 2 °C   |  |  |  |
| Test Start Date: 30/01/2024                        | Test End Date: 05/02/2024                        |  |  |  |
| Sampling Location: Kerandari Village – Buffer Zone |  |  |  |  |
| Predominant Wind Direction: From NW towards SE     | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 19.21  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 29.52  |  |  |
| 0.3      | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 73.78  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 36.55  |  |  |

---END OF REPORT----

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

· Declaration: -

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03. Items tested are as per the standard requirements.

All parameters in this report conforms to the specific standard.

Authorized Signatory Technical Manager

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Certified by: ISO 9001:2015(OMS) & ISO 45001:2010(OH5A5)



TEST REPORT

AMBIENT AIR QUALITY

(Baseria Village)

Format No: 7.8F-04

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001101F                             | Report Issue Date: 09/03/2024            |  |
| Job Card No: BES/0001594  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/01                         | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                             | Gen                | eral Information     |  |
|-----------------------------|--------------------|----------------------|--|
| Protocol: Ambient Air       |                    | Type of Sample: Ambi | ent Air  |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0205                                 |
| Sampling Date: 12/02/2024   | 0 13/02/2024       | Sample Receiving & F | Registration Date: 16/02/2024                  |
| Sample Condition: OK, Pro   | served & Scaled    |                      | overnent of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 23 °C        | R.Humidity: 60 %     | Barometric Pressure: 723 mmHg                  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 16/02/2024                           | Test End Date: 29/02/2024                        |
| Sampling Location: Baseria Village (NTPC Camp) - Core | Zone   |
| Predominant Wind Direction: From NW towards SE        | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.45  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 13.12  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 68.40  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 26.72  |  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Casality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8 29016/20/90/PCLL of 18th November 2009)
- Declaration: -
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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)



# TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

Format No: 7.8F-04

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001102F                             | Report Issue Date: 09/03/2024            |  |
| Job Card No : BES/0001595   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/02                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Ger                | neral Information              |  |
|--|--------------------|--------------------------------|--|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambie          | ent Air                                |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Referen          | nce: BES/0205                          |
| Sampling Date: 12/02/2024                | o 13/02/2024       | Sample Receiving & R           | egistration Date: 16/02/2024           |
| Sample Condition: OK, Preserved & Sealed |                    | Emission Due to: Move<br>Surre | ement of Vehicle<br>aunding Activities |
| Metrological Information Temp: 23 °C     |                    | R.Humidity: 60 %               | Barometric Pressure: 723 mmHg          |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 16/02/2024                       | Test End Date: 29/02/2024                        |
| Sampling Location: BGR Work Shop - Core Zone      |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |           |
|----------|--|-------|-----------------------------|-------------------|------------------------|-----------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result    |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 10,69     |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 170101000 |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | µg/m¹ | 24 Hours                    | IS 5182 Part 23   | 100                    | 17.48     |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 72.39     |

---END OF REPORT-

 Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8:29016/20/90/PCI-L of 18th November 2009)

Declaration: -

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03. Items tested are as per the standard requirements.

04. All parampters in this report conforms to the specific standard.





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Certified by: ISO 9001:2015(QM5) & ISO 45001:2018(OHSAS)



Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001103F                             | Report Issue Date: 09/03/2024            |  |
| Job Card No : BES/00001596  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/ FEB/AAQ/03                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

M/s NTPC Ltd. Client Name & Address: -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 75.3 /                                   | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0205                                |
| Sampling Date: 12/02/2024                | 0 13/02/2024       | Sample Receiving & I | Registration Date: 16/02/2024                 |
| Sample Condition: OK, Preserved & Sealed |                    | 5.5.38               | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 23 °C        | R.Humidity: 60 %     | Barometric Pressure: 723 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 16/02/2024  | Test End Date : 29/02/2024                       |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (50 <sub>7</sub> )                             | µg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.96  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 10.26  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 83.88  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m <sup>1</sup> | 24 Hours                    | IS 5182 Part 24   | 60                     | 45.00  |  |  |

-END OF REPORT-

- Norms: NAACS (National Ambient Air Custity Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
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  - Items tespe@are as per the standard requirements.
  - 64 All pagensyters in this report conforms to the specific standard.





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Certified by: 1SO 9901:2015(QMS) & ISO 45001;2018(OBSAS)



Format No: 7.85-04

# TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001104F                             | Report Issue Date: 09/03/2024            |  |
| Job Card No : BES/0001597   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/04                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                             | Gen                | eral Information     |   |
|-----------------------------|--------------------|----------------------|---|
| Protocol: Ambient Air       |                    | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0205                                |
| Sampling Date: 12/02/2024   | 0 13/02/2024       | Sample Receiving & I | Registration Date: 16/02/2024                 |
| Sample Condition: OK, Pre   | served & Sealed    | 100                  | ovement of Vehicles &<br>grounding Activities |
| Metrological Information    | Temp: 23 °C        | R.Humidity: 60 %     | Barometric Pressure: 723 mmHg                 |

| Sample   | Description                                      |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 16/02/2024  | Test End Date : 29/02/2024                       |  |  |  |
| Sampling Location: Tarbesa Village - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |   |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|---|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result                                  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³             | 24 Hours                    | IS 5182 Part-02   | 80                     | 06,79                                   |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m <sup>1</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 110000000000000000000000000000000000000 |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m <sup>1</sup> | 24 Hours                    | IS 5182 Part 23   | 100                    | 71.66                                   |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 38.24                                   |  |

---END OF REPORT---

Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)

Declaration: -

01. Reported results are related only to the item tested.

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(i3. Items tested are as per the standard requirements.

04. All parametrs in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

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Format No: 7.8F-04

# TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| FIRST FORT   | INIGHT                                   |
|--|--|
| Unique Lab Report No: TC1203923000001105F                            | Report Issue Date: 09/03/2024            |
| Job Card No : BES/0001598  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/05                        | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7.00.0 7                    | Gen                | eral Information     |   |
|-----------------------------|--------------------|----------------------|---|
| Protocol: Ambient Air       |                    | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0205                                |
| Sampling Date: 13/02/2024   | to 14/02/2024      | Sample Receiving & I | Registration Date: 16/02/2024                 |
| Sample Condition: OK, Pre   | served & Scaled    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 22 °C        | R.Humidity: 62 %     | Barometric Pressure: 726 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 * 2 °C |  |  |  |  |
| Test Start Date: 16/02/2024  | Test End Date: 29/02/2024                        |  |  |  |
| Sampling Location: Manatu Village - Buffer Zone  | And the second second                            |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kuman |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |  |
|----------|--|-------|-----------------------------|-------------------|------------------------|--|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result   |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m° | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.55  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | 15 5182 Part-06   | 80                     | The Partie of State o |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 60.63  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 28,61  |

---END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the garette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





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Format No: 7.8F-04

TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000001106F                            | Report Issue Date: 09/03/2024            |  |
| Job Card No : BES/0001599  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/06                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: -M/s NTPC Ltd. Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|                             | Gen                | eral Information     |  |
|-----------------------------|--------------------|----------------------|--|
| Protocol: Ambient Air       |                    | Type of Sample: Amb  | ent Air  |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0205                                 |
| Sampling Date: 13/02/2024:  | o 14/02/2024       | Sample Receiving & I | Registration Date: 16/02/2024                  |
| Sample Condition: OK, Pre-  | served & Sealed    |                      | overnent of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 22 °C        | R.Humidity: 62 %     | Barometric Pressure: 726 mmHg                  |

| Sample  | Description                                     |
|---|---|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |
| Test Start Date: 16/02/2024                       | Test End Date: 29/02/2024                       |
| Sampling Location: Palura Village - Buffer Zone   |   |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kuma |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 06,68  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 08.08  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 61.49  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 25.83  |

Norms: NAACS (National Ambient Air Quality Standards as per published in the garette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCH of

Declaration: -

01. Reported results are related only to the item tested.

38th November 2009)

Tested by

02. This report is the property of laboratory & should not be used unless advised.

(i). Items tested are as per the standard requirements.

04 All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001107F                             | Report Issue Date: 09/03/2024            |  |
| Job Card No : BES/0001600   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/07                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

M/s NTPC Ltd. Client Name & Address: -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 76.3.7                      | Gen                | eral Information            |   |  |
|-----------------------------|--------------------|-----------------------------|---|--|
| Protocol: Ambient Air       |                    | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere        | nce: BES/0205                                 |  |
| Sampling Date: 13/02/2024   | o 14/02/2024       | Sample Receiving & I        | Registration Date: 16/02/2024                 |  |
| Sample Condition: OK, Pre   | served & Sealed    |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information    | Temp: 22 °C        | R.Humidity: 62 %            | Barometric Pressure: 726 mmHg                 |  |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 16/02/2024                       | Test End Date: 29/02/2024                        |
| Sampling Location: Jordag School - Buffer Zone    | /  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              | 100                    |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m° | 24 Hours                    | 15 5182 Part-02   | 80                     | 11.25  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 17.80  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 72.38  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 42.69  |

---END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B 29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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Certified by: 1SO 9001:2015(OMS) & 1SO 45001:2018(OHSAS)



TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

Format No: 7.8F-04

| FIRST FORTNIGHT   |  |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000001108F                             | Report Issue Date: 09/03/2024            |  |  |
| Job Card No: BES/0001601  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/08                         | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                 | eral Information     |   |
|--|---------------------|----------------------|---|
| Protocol: Ambient Air                    |                     | Type of Sample: Amb  | ient Air                                    |
| Sample Collected By: Manis               | sh Kr. Singh & Team | Sampling Plan Refere | nce : BES/0205                              |
| Sampling Date: 13/02/2024 to 14/02/2024  |                     | Sample Receiving & I | Registration Date: 16/02/2024               |
| Sample Condition: OK, Preserved & Sealed |                     | 7.500                | overnent of Vehicles & crounding Activities |
| Metrological Information                 | Temp: 22 °C         | R.Humidity: 62 %     | Barometric Pressure: 726 mmHg               |

| Sample   | Description                                      |
|--|--|
| Sample Temperature at the time of receiving: 5 °C  | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 16/02/2024                        | Test End Date: 29/02/2024                        |
| Sampling Location: Kerandari Village - Buffer Zone |  |
| Predominant Wind Direction: From NW towards SE     | Customer Representative Name : Mr. Prakash Kumas |

|          |  |       | Analysis Re                 | sult              |                        |                |
|----------|--|-------|-----------------------------|-------------------|------------------------|----------------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result         |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m² | 24 Hours                    | 15 5182 Part-02   | 80                     | 18.05          |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     |                |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>20</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 27.49          |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 69.87<br>34.28 |

-END OF REPORT— Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B. 29016/20/90/PCI-L of

Declaration: -

Reported results are related only to the item tested.

18th November 2009)

02. This report is the property of laboratory & should not be used traless advised.

03. Items tested/are as per the standard requirements.

04. All parameters in this report conforms to the specific standard.





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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(QHSAS)



Format No. 7.8F-04

TEST DEPORT

(Baseria Village)

|     | ۰ | BARD A | - 43 | And A | 20.65 |       |   |
|-----|---|--------|------|-------|-------|-------|---|
| AMB | H | ENT    | A    | IR    | QU    | ALITY | ( |
| 100 | 4 |        |      | * **  | **    |       |   |

| SECOND FORTNIGHT  |  |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000001168F                             | Report Issue Date: 09/03/2024            |  |  |
| Job Card No : BES/0001699   | Discipline : Chemical                    |  |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/09                         | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: -M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /53/                                     | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere | nce : BES/0220                                |
| Sampling Date: 26/02/2024                | to 27/02/2024      | Sample Receiving & I | Registration Date: 29/02/2024                 |
| Sample Condition: OK, Preserved & Scaled |                    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 22 °C        | R.Humidity: 65 %     | Barometric Pressure: 727 mmHg                 |

| Sample  | Description                                     |
|---|---|
| Sample Temperature at the time of receiving: 5°C      | Temperature at the time of Analysis: 25 ± 2 °C  |
| Test Start Date: 29/02/2024                           | Test End Date: 07/03/2024                       |
| Sampling Location: Baseria Village (NTPC Camp) - Core | Zone  |
| Predominant Wind Direction: From NW towards SE        | Customer Representative Name : Mr Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (5O <sub>2</sub> )                             | µg/m¹ | 24 Hours                    | IS 5182 Part-02   | 80                     | 10.62  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 15.41  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 74.58  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 30,17  |

---END OF REPORT-

- Norms: NAAQS (National Ambient Air Casality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCFL of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 92. This report is the property of laboratory & should not be used unless advised.
  - Items tested are as per the standard requirements.

Fred by

All parameters in this report conforms to the specific standard. 04.





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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)



# TEST REPORT AMBIENT AIR QUALITY

(BGR Workshop)

Format Nov. 7.8F-04

| SECOND FORTNIGHT  |  |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000001169F                             | Report Issue Date: 09/03/2024            |  |  |
| Job Card No : BES/0001700   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/10                         | Group : Atmospheric Pollution            |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen           | eral Information     |   |
|--|---------------|----------------------|---|
| Protocol: Ambient Air                        |               | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By: Manish kr. Singh & Team |               | Sampling Plan Refere | ence : BES/0220                               |
| Sampling Date: 26/02/2024                    | to 27/02/2024 | Sample Receiving & I | Registration Date ; 29/02/2024                |
| Sample Condition: OK, Preserved & Sealed     |               |                      | ovement of Vehicles &<br>prounding Activities |
| Metrological Information                     | Temp: 22 "C   | R.Humidity: 65%      | Barometric Pressure: 727 mmHg                 |
| stetrological Information                    | 1 cmp: 22 C   | K.Humidity : 0.5 %   | Barometric Pressure: 727 ff                   |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 29/02/2024                       | Test End Date: 07/03/2024                        |
| Sampling Location: BGR Workshop - Core Zone       |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

| Analysis Result |  |                   |                             |                   |                        |        |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>*</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 12.47  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 18.52  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 78.55  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 36.14  |

---END OF REPORT-

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCHL of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





(BIOCRAT ENVIRONMENTAL LAB)

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TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

Format No. 7.8F-04

| SECOND FORTNIGHT  |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001170F                             | Report Issue Date: 09/03/2024            |  |
| Job Card No : BES/0001701   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/11                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

M/s NTPC Ltd. Client Name & Address: -

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 76.07                                    | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere | nce : BES/0220                                |
| Sampling Date: 26/02/2024                | lo 27/02/2024      | Sample Receiving & I | Registration Date: 29/02/2024                 |
| Sample Condition: OK, Preserved & Scaled |                    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 22 °C        | R.Humidity: 65 %     | Barometric Pressure: 727 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: $5  ^{\circ}\text{C}$ Temperature at the time of Analysis: $25 \pm 2  ^{\circ}$ |  |  |  |  |
| Test Start Date: 29/02/2024  | Test End Date: 07/03/2024                        |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |                |
|----------|--|-------|-----------------------------|-------------------|------------------------|----------------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result         |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m  | 24 Hours                    | IS 5182 Part-02   | 80                     | 10.67          |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | 15 5182 Part-06   | 80                     | 77 50 50 500   |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 14.08          |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 89.63<br>48.34 |

--END OF REPORT-

- NOTHIS: NAACIS (National Archient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B. 29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - All parameters in this report conforms to the specific standard.





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Format No: 7,8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000001171F                             | Report Issue Date: 09/03/2024            |
| Job Card No : BES/0001702   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/12                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 15.9.7                                   | Gen                | eral Information     |  |
|--|--------------------|----------------------|--|
| Protocol : Ambient Air                   |                    | Type of Sample: Amb  | ient Air                                       |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere | ence : BES/0220                                |
| Sampling Date: 26/02/2024 (              | o 27/02/2024       | Sample Receiving & I | Registration Date: 29/02/2024                  |
| Sample Condition: OK, Preserved & Scaled |                    |                      | ovement of Vehicles &<br>errounding Activities |
| Metrological Information                 | Temp: 22 °C        | R.Humidity: 65 %     | Barometric Pressure: 727 mmHg                  |

| Sample   | Description  |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 29/02/2024  | Test End Date: 07/03/2024  |  |  |  |  |
| Sampling Location: Tarbesa Village - Core Zone   | A STATE OF THE STA |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kuman   |  |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |       |
|----------|--|-------|-----------------------------|-------------------|------------------------|-------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Resul |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.46 |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 13.25 |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 76.28 |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 42.81 |

-END OF REPORT-

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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Certified by: ISO 9801:2015(QMS) & ISO 45001:2018(OHSAS)



Format No: 7,8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FORTNIGHT  |  |
|---|--|
| Unique Lab Report No: TC1203923000001172F                             | Report Issue Date: 09/03/2024            |
| Job Card No : BES/0001703   | Discipline : Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/13                         | Group : Atmospheric Pollution            |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1531                                     | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol : Ambient Air                   |                    | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere | nce : BES/0220                                |
| Sampling Date: 27/02/2024                | 0 28/02/2024       | Sample Receiving & I | Registration Date: 29/02/2024                 |
| Sample Condition: OK, Preserved & Sealed |                    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 23 °C        | R.Humidity: 64 %     | Barometric Pressure: 725 mmHg                 |

| Sample Description   |   |  |  |  |  |
|--|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |  |  |
| Test Start Date : 29/02/2024   | Test End Date: 07/03/2024                       |  |  |  |  |
| Sampling Location: Manatu Village - Buffer Zone  |   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kuma |  |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 10.39  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 12.27  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 66,41  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 31.96  |

-END OF REPORT-

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





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Format No. 7.8F-Q4

### TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| SECOND FO                                     | RTNIGHT                                 |
|---|---|
| Unique Lab Report No: TC1203923000001173F     | Report Issue Date: 09/03/2024           |
| Job Card No : BES/0001704                     | Discipline: Chemical                    |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/14 | Group : Atmospheric Pollution           |
| Type of Industry: Coal Mines                  | Product / Material of Test: Ambient Air |

Client Name & Address: - M/s NTPC Ltd.

Work Order No: BGR/KRD/WO/0226/ENVIRONMENT

MONITORING/BES/2023-24

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

Work Order Date: 24/06/2023

| 78087   | Gen         | eral Information  |                               |  |
|---|-------------|---|-------------------------------|--|
| Protocol : Ambient Air  |             | Type of Sample: Ambi  | ent Air                       |  |
| Sample Collected By: Manish kr. Singh & Team<br>Sampling Date: 27/02/2024 to 28/02/2024 |             | Sampling Plan Reference : BES/0220<br>Sample Receiving & Registration Date : 29/02/2024 |                               |  |
|   |             |   |                               |  |
| Metrological Information  | Temp: 23 °C | R.Humidity: 64 %  | Barometric Pressure: 725 mmHg |  |

| Sample   | Description               |  |  |  |  |
|--|---------------------------|--|--|--|--|
| Sample Temperature at the time of receiving : 5 °C Temperature at the time of Analysis : 25 ± 2 °C |                           |  |  |  |  |
| Test Start Date: 29/02/2024  | Test End Date: 07/03/2024 |  |  |  |  |
| Sampling Location: Pahra Village - Buffer Zone   |                           |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   Customer Representative Name: Mr. Prakash Kum     |                           |  |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m² | 24 Hours                    | IS 5182 Part-02   | 80                     | 08.41  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 10.34  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 68,61  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 29.45  |

---END OF REPORT---

- Norms: NAAGS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- · Declaration: -
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  - 63. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.





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Certified by: 1SO 9001:2015(QMS) & 1SO 45001:2018(OHSAS)



TEST REPORT

AMBIENT AIR QUALITY

(Jordag Village)

Format No: 7.85-04

| SECOND FOR  | TNIGHT                                   |
|---|--|
| Unique Lab Report No: TC1203923000001174F                             | Report Issue Date: 09/03/2024            |
| Job Card No : BES/0001705   | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/15                         | Group: Atmospheric Pollution             |
| Type of Industry : Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |

Client Name & Address: - M/s NTPC Ltd.
Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7537 8                                       | Gen         | eral Information                   |   |  |
|--|-------------|------------------------------------|---|--|
| Protocol: Ambient Air                        |             | Type of Sample: Ambi               | ent Air                                       |  |
| Sample Collected By: Manish kr. Singh & Team |             | Sampling Plan Reference : BES/0220 |   |  |
| Sampling Date : 27/02/2024 t                 |             | Sample Receiving & F               | Registration Date: 29/02/2024                 |  |
| Sample Condition: OK, Preserved & Sealed     |             |                                    | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                     | Temp: 23 °C | R.Humidity: 64 %                   | Barometric Pressure: 725 mmHg                 |  |

| Sample   | Description                                      |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 = 2 °C |  |  |  |  |  |
| Test Start Date: 29/02/2024  | Test End Date: 07/03/2024                        |  |  |  |  |
| Sampling Location: Jordag Village - Buffer Zone  |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE.  | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |                   |                             |                   |                        |        |  |  |
|-----------------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 12.46  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 19.75  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 78.22  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 50.21  |  |  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCH, of 18th November 2009)
- Declaration: -
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  - All paragreters in this report conforms to the specific standard.





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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OHSAS)



### TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

Format No: 7.8F-04

| SECOND FORTNIGHT  |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001175F                             | Report Issue Date: 09/03/2024            |  |
| Job Card No : BES/0001706   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/FEB/AAQ/16                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 1. 15.1.1                                    | Gen           | eral Information     |   |
|--|---------------|----------------------|---|
| Protocol: Ambient Air                        |               | Type of Sample: Ambi | lent Air                                      |
| Sample Collected By: Manish kr. Singh & Team |               | Sampling Plan Refere | nce : BES/0220                                |
| Sampling Date: 27/02/2024                    | to 28/02/2024 | Sample Receiving & I | Registration Date: 29/02/2024                 |
| Sample Condition: OK, Preserved & Scaled     |               |                      | ovement of Vehicles &<br>grounding Activities |
| Metrological Information                     | Temp: 23 °C   | R.Humidity: 64%      | Barometric Pressure: 725 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 29/02/2024  | Test End Date: 07/03/2024                        |  |  |  |
| Sampling Location: Kerandari Village – Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m" | 24 Hours                    | IS 5182 Part-02   | 80                     | 19.38  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 28.96  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 75.61  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 37.29  |

---END OF REPORT---

- Norms: NAACS (National Ambient Air Caulity Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November 2009)
- · Declaration:
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Format No: 7,8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001286F                             | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/0001883   | Discipline : Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/01                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address : - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7.60 1                      | Gen               | eral Information     |   |
|-----------------------------|-------------------|----------------------|---|
| Protocol: Ambient Air       |                   | Type of Sample: Ambi | ient Air                                      |
| Sample Collected By : Manis | h Kr.Singh & Team | Sampling Plan Refere | nce : BES/0245                                |
| Sampling Date: 11/03/2024   | e 12/03/2024      | Sample Receiving & I | Registration Date: 15/03/2024                 |
| Sample Condition: OK, Pre   | served & Sealed   |                      | ovement of Vehicles &<br>grounding Activities |
| Metrological Information    | Temp: 25 °C       | R.Humidity: 59 %     | Barometric Pressure: 710 mmHg                 |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C     | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/03/2024                           | Test End Date: 30/03/2024                        |
| Sampling Location: Baseria Village (NTPC Camp) - Core | e Zone   |
| Predominant Wind Direction: From NW towards SE        | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 12.14  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 17.22  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 81.44  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 35,50  |

-END OF REPORT-

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B 29016/20/90/PCHL of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised
  - 03. Items tested are as per the standard requirements.
  - 64 All parameters in this report conforms to the specific standard.



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Certified by: ISO 9001:2015(QMS) & ISO 45001:2018(OBSAS)



Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(BGR Work Shop)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001287F                             | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/0001884   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/ MAR/AAQ/02                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7637  | Ger         | neral Information                                |  |
|---|-------------|--|--|
| Protocol : Ambient Air                        |             | Type of Sample: Ambie                            | ent Air                                |
| Sample Collected By : Manish Kr. Singh & Team |             | Sampling Plan Referen                            | nce: BES/0245                          |
| Sampling Date: 11/03/2024 to 12/03/2024       |             | Sample Receiving & Registration Date: 15/03/2024 |  |
| Sample Condition: OK, Preserved & Sealed      |             | Emission Due to: Move<br>Surre                   | ement of Vehicle<br>bunding Activities |
| Metrological Information                      | Temp: 25 °C | R.Humidity: 59 %                                 | Barometric Pressure: 710 mmHg          |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C  |
| Test Start Date: 15/03/2024                       | Test End Date: 30/03/2024                        |
| Sampling Location: BGR Work Shop - Core Zone      | ATTENDED TO THE REAL PROPERTY.                   |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 14.86  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 20.11  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 84.68  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 40.36  |

---END OF REPORT--

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCHL of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
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  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001288F                             | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/00001885  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/ MAR/AAQ/03                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 75.9.7                      | Gen                | eral Information     |   |
|-----------------------------|--------------------|----------------------|---|
| Protocol: Ambient Air       |                    | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0245                                |
| Sampling Date: 11/03/2024:  | o 12/03/2024       | Sample Receiving & F | Registration Date: 15/03/2024                 |
| Sample Condition: OK, Pre-  | served & Sealed    | 100                  | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 25 °C        | R.Humidity: 59 %     | Barometric Pressure: 710 mmHg                 |

| Sample Description                                |  |  |  |
|---|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |  |
| Test Start Date: 15/03/2024                       | Test End Date: 30/03/2024                        |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone |  |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |  |  |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 12.36  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 17.54  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 90.12  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 49.33  |

---END OF REPORT---

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unirss advised,
  - 03. Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.



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TEST REPORT

AMBIENT AIR QUALITY

(Tarhesa Village)

Format No: 7.8F-04

| FIRST FORTNIGHT  |  |
|--|--|
| Unique Lab Report No: TC1203923000001289F                            | Report Issue Date: 06/04/2024            |
| Job Card No : BES/0001886  | Discipline: Chemical                     |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/04                        | Group: Atmospheric Pollution             |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 76.17                       | Gen                | eral Information     |   |
|-----------------------------|--------------------|----------------------|---|
| Protocol: Ambient Air       |                    | Type of Sample: Amb  | ent Air                                       |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0245                                |
| Sampling Date: 11/03/2024 ( | to 12/03/2024      | Sample Receiving & I | Registration Date: 15/03/2024                 |
| Sample Condition : OK, Pre  | served & Scaled    |                      | ovement of Vehicles &<br>grounding Activities |
| Metrological Information    | Temp: 25 °C        | R.Humidity: 59 %     | Barometric Pressure: 710 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/03/2024  | Test End Date: 30/03/2024                        |  |  |  |
| Sampling Location: Tarhesa Village - Core Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          |  |                   | Analysis Re                 | sult              |                        |        |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>*</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 09.40  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     | 16.42  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 80.42  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 45.61  |

---END OF REPORT-

- Norms: NAAQS (National Ambient Air Chality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All payameters in this report conforms to the specific standard.

SERVICE SERVICES



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Certified by: ISO 9001:2015[QMS] & ISO 4500]:2018(OHSA5).



Formet No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| FIRST FORT  | FIRST FORTNIGHT                          |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000001290F                             | Report Issue Date: 06/04/2024            |  |  |
| Job Card No : BES/0001887   | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/05                         | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 78.3.7                      | Gen                | eral Information     |   |
|-----------------------------|--------------------|----------------------|---|
| Protocol : Ambient Air      |                    | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0245                                |
| Sampling Date: 12/03/2024 t | 0 13/03/2024       | Sample Receiving & F | Registration Date: 15/03/2024                 |
| Sample Condition: OK, Pre-  | served & Sealed    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 24 °C        | R.Humidity: 61%      | Barometric Pressure: 712 mmHg                 |

| Sample   | Description                                     |  |  |  |  |
|--|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |   |  |  |  |  |
| Test Start Date: 15/03/2024  | Test End Date: 30/03/2024                       |  |  |  |  |
| Sampling Location: Manatu Village - Buffer Zone  |   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name: Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m² | 24 Hours                    | IS 5182 Part-02   | 80                     | 11.66  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 13,44  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | 1S 5182 Part 23   | 100                    | 69,35  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 34.69  |  |  |

---END OF REPORT---

- Norms: NAACJS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B,29016/20/90/PCI-L of 18th November 2009)
- · Declaration: -
  - 01. Reported results are related only to the item tested.
  - 92. This report is the property of laboratory & should not be used unless advised,
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

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Format No: 7.85-04

## TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| FIRST FORTNIGHT   |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001291F                             | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/0001888   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/06                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.
Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 7537                        | Gen                | eral Information     |   |
|-----------------------------|--------------------|----------------------|---|
| Protocol: Ambient Air       |                    | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0245                                |
| Sampling Date: 12/03/2024 t |                    | Sample Receiving & F | Registration Date: 15/03/2024                 |
| Sample Condition: OK, Pre-  | served & Sealed    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information    | Temp: 24 °C        | R.Humidity: 61 %     | Barometric Pressure: 712 mmHg                 |

| Sample   | Description                                      |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 15/03/2024  | Test End Date: 30/03/2024                        |  |  |  |  |
| Sampling Location: Pahra Village - Buffer Zone   |  |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

|          | Analysis Result  |                   |                             |                   |                        |        |  |  |  |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 09.37  |  |  |  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     | 11.67  |  |  |  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 71.32  |  |  |  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 32,76  |  |  |  |

-END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPC8 Notification No 8.29016/20/90/PCHL of 18th November 2009)
- · Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report jethe property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.



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### TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| FIRST FORTNIGHT  |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000001292F                            | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/0001889  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/07                        | Group : Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 44.4 /                                   | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambi | ent Air                                       |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Refere | nce : BES/0245                                |
| Sampling Date: 12/03/2024 t              | o 13/03/2024       | Sample Receiving & I | Registration Date: 15/03/2024                 |
| Sample Condition: OK, Preserved & Scaled |                    | 0.000                | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 24 °C        | R.Humidity: 61%      | Barometric Pressure: 712 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/03/2024  | Test End Date : 30/03/2024                       |  |  |  |
| Sampling Location: Jordag School - Buffer Zone   | ALL - PA-  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 14.70  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 20.01  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 81.14  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 54.49  |

---END OF REPORT---

- Norms: NAAGS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29015/20/90/PCI-L of 18th November 2009)
- · Declaration: -
  - 01. Reported results are related only to the item tested.
  - 62. This report is the property of laboratory & should not be used unless advised.
  - Items tested are as per the standard requirements.
  - 04. All purameters in this report conforms to the specific standard.



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| FIRST FORTNIGHT   |   |  |
|---|---|--|
| Unique Lab Report No: TC1203923000001293F                             | Report Issue Date: 06/04/2024           |  |
| Job Card No : BES/0001890   | Discipline: Chemical                    |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/08                         | Group : Atmospheric Pollution           |  |
| Type of Industry: Coal Mines  | Product / Material of Test: Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023            |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| 76.17                                    | Gen                | eral Information            |   |  |
|--|--------------------|-----------------------------|---|--|
| Protocol : Ambient Air                   |                    | Type of Sample: Ambient Air |   |  |
| Sample Collected By : Manis              | h Kr. Singh & Team | Sampling Plan Refere        | nce : BES/0245                                |  |
| Sampling Date: 12/03/2024                | to 13/03/2024      | Sample Receiving & I        | Registration Date: 15/03/2024                 |  |
| Sample Condition: OK, Preserved & Sealed |                    |                             | ovement of Vehicles &<br>rrounding Activities |  |
| Metrological Information                 | Temp: 24 °C        | R.Humidity: 61 %            | Barometric Pressure: 712 mmHg                 |  |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 15/03/2024  | Test End Date: 30/03/2024                        |  |  |  |
| Sampling Location: Kerandari Village – Buffer Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 20.87  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 29.47  |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 79,38  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 40.11  |

-END OF REPORT-

- Norms: NAACIS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 188h November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 62. This report is the property of laboratory & should not be used unless advised.
  - (G. Items testog are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

SERVICE TO SERVICE



(BIOCRAT ENVIRONMENTAL LAB)

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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Baseria Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000001373F                            | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/0002024  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/09                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /6.3 / 8                                 | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    | -1/5-0             | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere | nce : BES/0265                                |
| Sampling Date: 27/03/2024                | to 28/03/2024      | Sample Receiving & I | Registration Date: 30/03/2024                 |
| Sample Condition: OK, Preserved & Scaled |                    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 26 °C        | R.Humidity: 57%      | Barometric Pressure: 711 mmHg                 |

| Sample  | Description                                      |  |  |  |  |
|---|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5°C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/03/2024   | Test End Date: 05/04/2024                        |  |  |  |  |
| Sampling Location: Baseria Village (NTPC Camp) - Con  | e Zone   |  |  |  |  |
| Predominant Wind Direction: From NW towards SE  | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 12.00  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | 15 5182 Part-06   | 80                     | 18.31  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>30</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 85.47  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 38.20  |  |

---END OF REPORT-

- Norms: NAAQ5 (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCFL of 18th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised,
  - 63. Items tested are as per the standard requirements.
  - 04. All paramyters in this report conforms to the specific standard.



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Certified by: 18O 9001:2015(OMS) & 18O 45001:2018(OHSAS)



## TEST REPORT AMBIENT AIR QUALITY

(BGR Workshop)

Format No: 7.8F-04

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000001374F                            | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/0002025  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/10                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test ; Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere | ence : BES/0265                               |
| Sampling Date: 27/03/2024                | 0 28/03/2024       | Sample Receiving & I | Registration Date: 30/03/2024                 |
| Sample Condition: OK, Preserved & Scaled |                    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 26 °C        | R.Humidity: 57 %     | Barometric Pressure: 711 mmHg                 |

| Sample Description                                |   |  |  |
|---|---|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis : 25 ± 2 °C |  |  |
| Test Start Date: 30/03/2024                       | Test End Date: 05/04/2024                       |  |  |
| Sampling Location: BGR Workshop - Core Zone       |   |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kuma |  |  |

|          |  |                   | Analysis Re                 | sult              |                        |                |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|----------------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result         |
| 01       | Sulphur Dioxide (50 <sub>2</sub> )                             | μg/m <sup>a</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 14,71          |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³             | 24 Hours                    | IS 5182 Part-06   | 80                     |                |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 21.15          |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 87.27<br>42.10 |

---END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standarth as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 61. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised.
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Bengwari Nadi Tola)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000001375F                            | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/0002026  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/11                        | Group ; Atmospheric Pollution            |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                | eral Information            |  |  |
|--|--------------------|-----------------------------|--|--|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambient Air |  |  |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere        | nce : BES/0265                             |  |
| Sampling Date: 27/03/2024                | to 28/03/2024      | Sample Receiving & I        | Registration Date: 30/03/2024              |  |
| Sample Condition: OK, Preserved & Sealed |                    |                             | ovement of Vehicles & grounding Activities |  |
| Metrological Information                 | Temp: 26 °C        | R.Humidity: 57 %            | Barometric Pressure: 711 mmHg              |  |

| Sample Description                                |  |  |  |  |
|---|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |  |  |  |
| Test Start Date: 30/03/2024                       | Test End Date: 05/04/2024                        |  |  |  |
| Sampling Location: Bengwari Nadi Tola - Core Zone |  |  |  |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kuman |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |                |
|----------|--|-------|-----------------------------|-------------------|------------------------|----------------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result         |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 12.26          |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m¹ | 24 Hours                    | IS 5182 Part-06   | 80                     |                |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 18.70          |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 88.46<br>47.55 |

---END OF REPORT---

 NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCHL of 18th November 2009)

Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised,

Items tested are as per the standard requirements.

04. All parameters in this report conforms to the specific standard



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Tarhesa Village)

| SECOND FORTNIGHT   |  |  |
|--|--|--|
| Unique Lab Report No: TC1203923000001376F                            | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/0002027  | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/12                        | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

| /63/                                     | Gen                | eral Information     | ( may )  |
|--|--------------------|----------------------|--|
| Protocol: Ambient Air                    |                    | Type of Sample: Amb  | ient Air                                       |
| Sample Collected By: Manis               | h kr. Singh & Team | Sampling Plan Refere | nce : BES/0265                                 |
| Sampling Date: 27/03/2024                | to 28/03/2024      | Sample Receiving & I | Registration Date: 30/03/2024                  |
| Sample Condition: OK, Preserved & Sealed |                    |                      | overnent of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 26 °C        | R.Humidity: 57 %     | Barometric Pressure: 711 mmHg                  |

| Sample  | Description  |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 30/03/2024                       | Test End Date: 05/04/2024  |
| Sampling Location: Tarbesa Village - Core Zone    | - A CONTRACTOR OF THE PROPERTY |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name ; Mr. Prakash Kumar   |

|          |  |                   | Analysis Re                 | sult              |                        |                |
|----------|--|-------------------|-----------------------------|-------------------|------------------------|----------------|
| SI<br>No | Specific Test Performed  | Unit              | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result         |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-02   | 80                     | 11,80          |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m <sup>3</sup> | 24 Hours                    | IS 5182 Part-06   | 80                     |                |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³             | 24 Hours                    | IS 5182 Part 23   | 100                    | 17.36          |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³             | 24 Hours                    | IS 5182 Part 24   | 60                     | 86.21<br>48.74 |

-END OF REPORT-

 Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No B.29016/20/90/PCH of 18th November 2009)

Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised

(3). Items tested are as per the standard requirements.

Tested by

04. All parameters in this report conforms to the specific standard.

TANCH SERVICE



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Format No: 7,8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Manatu Village)

| SECOND FORTNIGHT   |  |  |  |
|--|--|--|--|
| Unique Lab Report No: TC1203923000001377F                            | Report Issue Date: 06/04/2024            |  |  |
| Job Card No : BES/0002028  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/13                        | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Amb  | ient Air                                      |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere | nce : BES/0265                                |
| Sampling Date : 28/03/2024               | to 29/03/2024      | Sample Receiving & F | Registration Date: 30/03/2024                 |
| Sample Condition: OK, Preserved & Sealed |                    | 1.5                  | ovement of Vehicles &<br>prounding Activities |
| Metrological Information                 | Temp: 27.°C        | R.Humidity: 55 %     | Barometric Pressure: 709 mmHg                 |

| Sample  | Description                                      |
|---|--|
| Sample Temperature at the time of receiving: 5 °C | Temperature at the time of Analysis: 25 ± 2 °C   |
| Test Start Date: 30/03/2024                       | Test End Date : 05/04/2024                       |
| Sampling Location: Manatu Village - Buffer Zone   |  |
| Predominant Wind Direction: From NW towards SE    | Customer Representative Name : Mr. Prakash Kumar |

|          |  |       | Analysis Re                 | sult              |                        |        |
|----------|--|-------|-----------------------------|-------------------|------------------------|--------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | μg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 12.28  |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     |        |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 74.19  |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 36.24  |

-END OF REPORT-

- Norms: NAAQS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29036/20/90/PCF-L of 38th November 2009)
- · Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unless advised
  - 63. Items tested are as per the standard requirements.
  - 64. All parameters in this report conforms to the specific standard.

Tested by

Authorized Signatory Technical Manager

Add: - Surveshwari Nagari, liki Road, Bajin, P.O. Heliat Test. Ponchi, Turkhand. Pin -834005 Email Id: - biocratenyazgmail.com. Mobile No. - 7369019812, 8340405751, 9608708172



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Durkhand State Pollution Control Board (ISPCR)

Jharkhand State Pollution Control Board (JSPCB)
Certified by: ISO 9001:2015(OMS) & ISO 45001:2018(OHSAS)



Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Pahra Village)

| SECOND FOR   | SECOND FORTNIGHT                         |  |  |  |
|--|--|--|--|--|
| Unique Lab Report No: TC1203923000001378F                            | Report Issue Date: 06/04/2024            |  |  |  |
| Job Card No : BES/0002029  | Discipline: Chemical                     |  |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/14                        | Group : Atmospheric Pollution            |  |  |  |
| Type of Industry: Coal Mines   | Product / Material of Test : Ambient Air |  |  |  |
| Work Order No: BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                | eral Information     |  |
|--|--------------------|----------------------|--|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambi | ent Air  |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere | nce : BES/0265                                 |
| Sampling Date: 28/03/2024                | to 29/03/2024      | Sample Receiving & F | Registration Date: 30/03/2024                  |
| Sample Condition: OK, Preserved & Sealed |                    | 200                  | overnent of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 27 °C        | R.Humidity: 55 %     | Barometric Pressure: 709 mmHg                  |

| Sample   | Description                                      |  |  |  |  |
|--|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |  |
| Test Start Date: 30/03/2024  | Test End Date: 05/04/2024                        |  |  |  |  |
| Sampling Location: Pahra Village - Buffer Zone   | All Land Delication                              |  |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 09.26  |  |  |
| 02              | Oxides of Nitrogen (NO <sub>2</sub> )                          | μg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 12.70  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m¹ | 24 Hours                    | IS 5182 Part 23   | 100                    | 77.75  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 35.52  |  |  |

-END OF REPORT-

 Nortes: NAACS (National Ambient Air Casality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PCI-L of 18th November (2009)

· Declaration: -

01. Reported results are related only to the item tested.

02. This report is the property of laboratory & should not be used unless advised;

03. Items tested are as per the standard requirements.

ested by

64. All parameters in this report conforms to the specific standard.



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Format No: 7.8F-04

## TEST REPORT AMBIENT AIR QUALITY

(Jordag Village)

| SECOND FORTNIGHT  |  |  |
|---|--|--|
| Unique Lab Report No: TC1203923000001379F                             | Report Issue Date: 06/04/2024            |  |
| Job Card No : BES/0002030   | Discipline: Chemical                     |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/15                         | Group: Atmospheric Pollution             |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date: 24/06/2023              |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                | eral Information     |   |
|--|--------------------|----------------------|---|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambi | ient Air                                      |
| Sample Collected By : Manis              | h kr. Singh & Team | Sampling Plan Refere | nce : BES/0265                                |
| Sampling Date: 28/03/2024                | to 29/03/2024      | Sample Receiving & F | Registration Date: 30/03/2024                 |
| Sample Condition: OK, Preserved & Sealed |                    |                      | ovement of Vehicles &<br>rrounding Activities |
| Metrological Information                 | Temp: 27 °C        | R.Humidity:55%       | Barometric Pressure: 709 mmHg                 |

| Sample Description   |  |  |  |  |
|--|--|--|--|--|
| Sample Temperature at the time of receiving: 5 °C Temperature at the time of Analysis: 25 ± 2 °C |  |  |  |  |
| Test Start Date: 30/03/2024  | Test End Date: 05/04/2024                        |  |  |  |
| Sampling Location: Jordag Village - Buffer Zone  | Lacin and Sawasan and Control                    |  |  |  |
| Predominant Wind Direction: From NW towards SE   | Customer Representative Name : Mr. Prakash Kumar |  |  |  |

|          |  |       | Analysis Re                 | sult              |                        |                |
|----------|--|-------|-----------------------------|-------------------|------------------------|----------------|
| SI<br>No | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result         |
| 01       | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 14.70          |
| 02       | Oxides of Nitrogen (NO <sub>2</sub> )                          | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     |                |
| 03       | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 21.01<br>86.55 |
| 04       | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 51.61          |

---END OF REPORT-

- Norms: NAACS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No 8.29016/20/90/PC3-L of 38th November 2009)
- Declaration: -
  - 01. Reported results are related only to the item tested.
  - 02. This report is the property of laboratory & should not be used unites advised
  - 03. Items tested are as per the standard requirements.

Tested by

All parameters in this report conforms to the specific standard.



Accredited by NABL & Registered by

Jhurkhand State Pollution Control Board (JSPCB) Certified by: ISO 9001:2015(QMS) & ISO 45001:2016(OHSAS)



Format No: 7.8F-04

### TEST REPORT AMBIENT AIR QUALITY

(Kerandari Village)

| SECOND FORTNIGHT  |  |  |  |
|---|--|--|--|
| Unique Lab Report No: TC1203923000001380F                             | Report Issue Date: 06/04/2024            |  |  |
| Job Card No: BES/0002031  | Discipline: Chemical                     |  |  |
| Field Data Sheet Code: BES/BGR/KRD/MAR/AAQ/16                         | Group: Atmospheric Pollution             |  |  |
| Type of Industry: Coal Mines  | Product / Material of Test : Ambient Air |  |  |
| Work Order No : BGR/KRD/WO/0226/ENVIRONMENT<br>MONITORING/BES/2023-24 | Work Order Date : 24/06/2023             |  |  |

Client Name & Address: - M/s NTPC Ltd.

Kerandari Coal Mining Project, Sikri, Barkagaon, Hazaribag, Jharkhand 825311

|  | Gen                | eral Information   |                                |  |
|--|--------------------|--|--------------------------------|--|
| Protocol: Ambient Air                    |                    | Type of Sample: Ambient Air  |                                |  |
| Sample Collected By: Manis               | h kr. Singh & Team | Sampling Plan Refere   | nce : BES/0265                 |  |
| Sampling Date: 28/03/2024                | o 29/03/2024       | Sample Receiving & I   | Registration Date : 30/03/2024 |  |
| Sample Condition: OK, Preserved & Scaled |                    | Emission Due to: Movement of Velucles &:<br>Surrounding Activities |                                |  |
| Metrological Information                 | Temp: 27 °C        | R.Humidity: 55 %   | Barometric Pressure: 709 mmHg  |  |

| Sample Description                                 |   |  |  |
|--|---|--|--|
| Sample Temperature at the time of receiving: 5 °C  | Temperature at the time of Analysis : 25 ± 2 °C |  |  |
| Test Start Date: 30/03/2024                        | Test End Date: 05/04/2024                       |  |  |
| Sampling Location: Kerandari Village - Buffer Zone |   |  |  |
| Predominant Wind Direction: From NW towards SE     | Customer Representative Name : Mr. Prakash Kuma |  |  |

| Analysis Result |  |       |                             |                   |                        |        |  |  |  |
|-----------------|--|-------|-----------------------------|-------------------|------------------------|--------|--|--|--|
| SI<br>No        | Specific Test Performed  | Unit  | Time<br>Weighted<br>Average | Test Method<br>No | Norms<br>NAAQS<br>2009 | Result |  |  |  |
| 01              | Sulphur Dioxide (SO <sub>2</sub> )                             | µg/m³ | 24 Hours                    | IS 5182 Part-02   | 80                     | 21.34  |  |  |  |
| 02              | Oxides of Nitrogen (NO2)                                       | µg/m³ | 24 Hours                    | IS 5182 Part-06   | 80                     | 28.38  |  |  |  |
| 03              | Respirable Suspended<br>Particulate Matter (PM <sub>10</sub> ) | μg/m³ | 24 Hours                    | IS 5182 Part 23   | 100                    | 75.61  |  |  |  |
| 04              | Fine Particulate Matter<br>(PM <sub>2.5</sub> )                | μg/m³ | 24 Hours                    | IS 5182 Part 24   | 60                     | 38.61  |  |  |  |

---END OF REPORT---

- NOFMS: NAACIS (National Ambient Air Quality Standards as per published in the gazette of India: Extraordinary, CPCB Notification No. 8, 29016/20/90/PCI-L of 18th November 2009)
- Declaration: -
  - 01. Reported regults are related only to the item tested.
  - 62. This report is the property of laboratory & should not be used unless advised,
  - 03. Items tested are as per the standard requirements.
  - 04. All parameters in this report conforms to the specific standard.

#### **POLLUTION CONTROL MEASURES**





Crusher with fixed water sprinkling system





Transportation vehicles covered with tarpaulin





**Wet Drilling** 







**Settling Pond** 



Plantation