



HDD-272, Phase III - Near JP Chowk
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

| | | | |
|---|--|-------------------------------------|--|
| Name & Address Of The Customer | | REPORT NO | UES/TR/21-22/06262 |
| TO, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/AAQM/010839-010846 |
| | | DATE OF SAMPLING | 03/01/2022 to 31/01/2022 |
| | | DATE OF RECEIPT | 04/01/2022 to 01/02/2022 |
| | | DATE OF REPORT | 02/02/2022 |
| | | DATE OF ANALYSIS | START: 05/01/2022 END: 02/02/2022 |
| | | SAMPLE DETAILS | |
| MONITORING FOR | AMBIENT AIR QUALITY MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058, DATE: 30-SEP-2021 |
| SAMPLING LOCATION | R & R COLONY, CHANDAN NAGAR (BUFFER ZONE) | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | |
| SAMPLE QUANTITY/PACKING | FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO. | | |

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

| Parameter | Method Reference | NAAQM Standard |
|--|--|----------------|
| Particulate Matter size less than 10 microns (PM ₁₀) | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I | 100 |
| Particulate Matter size less than 2.5 microns (PM _{2.5}) | CPCB Guidelines Vol.-I | 60 |
| Sulphur Dioxide (SO ₂) | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80 |
| Nitrogen Dioxide (NO ₂) | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I | 80 |
| Carbon Monoxide (CO)* | IS 5182 (Part 10): 1999, RA 2003 | 4.0 |
| Mercury (Hg) | EPA Method IO-5 | -- |

TEST REPORT

| Date of Sampling | PM ₁₀ µg/m ³ | PM _{2.5} µg/m ³ | SO ₂ µg/m ³ | NO ₂ µg/m ³ | CO* mg/m ³ | Hg ng/m ³ |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022 | 74 | 28 | 12 | 20 | 0.9 | N.D. |
| 07.01.2022 | 68 | 22 | 08 | 22 | 0.8 | N.D. |
| 11.01.2022 | 54 | 28 | 06 | 26 | 1.2 | N.D. |
| 14.01.2022 | 75 | 22 | 10 | 20 | 0.8 | N.D. |
| 17.01.2022 | 66 | 26 | 16 | 28 | 0.6 | N.D. |
| 24.01.2022 | 72 | 20 | 12 | 22 | 0.9 | N.D. |
| 28.01.2022 | 68 | 25 | 14 | 28 | 1.1 | N.D. |
| 31.01.2022 | 72 | 22 | 12 | 26 | 0.8 | N.D. |

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

- > The use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

| | | |
|---|---|---|
|  REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY |
|---|---|---|

-----End of the test report-----



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| | | | | |
|---|--|--------------------------|---|-----------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06263 | |
| TO, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/AAQM/010847-010854 | |
| | | DATE OF SAMPLING | 03/01/2022 to 31/01/2022 | |
| | | DATE OF RECEIPT | 04/01/2022 to 01/02/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 05/01/2022 | END: 02/02/2022 |
| | | SAMPLE DETAILS | | |
| MONITORING FOR | AMBIENT AIR QUALITY MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | KATHAUTIYA VILLAGE (BUFFER ZONE) | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO. | | | |

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

| Parameter | Method Reference | NAAQM Standard |
|--|--|----------------|
| Particulate Matter size less than 10 microns (PM ₁₀) | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I | 100 |
| Particulate Matter size less than 2.5 microns (PM _{2.5}) | CPCB Guidelines Vol.-I | 60 |
| Sulphur Dioxide (SO ₂) | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80 |
| Nitrogen Dioxide (NO ₂) | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I | 80 |
| Carbon Monoxide (CO)* | IS 5182 (Part 10): 1999, RA 2003 | 4.0 |
| Mercury (Hg) | EPA Method IO-5 | -- |

TEST REPORT

| Date of Sampling | PM ₁₀ µg/m ³ | PM _{2.5} µg/m ³ | SO ₂ µg/m ³ | NO ₂ µg/m ³ | CO* mg/m ³ | Hg ng/m ³ |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022 | 78 | 22 | 12 | 28 | 0.9 | N.D. |
| 07.01.2022 | 70 | 28 | 10 | 22 | 0.4 | N.D. |
| 11.01.2022 | 76 | 24 | 08 | 24 | 0.8 | N.D. |
| 14.01.2022 | 62 | 30 | 14 | 20 | 0.2 | N.D. |
| 17.01.2022 | 78 | 34 | 12 | 26 | 0.9 | N.D. |
| 24.01.2022 | 70 | 30 | 16 | 22 | 0.4 | N.D. |
| 28.01.2022 | 68 | 28 | 12 | 24 | 0.8 | N.D. |
| 31.01.2022 | 64 | 24 | 18 | 28 | 0.6 | N.D. |

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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| | | |
|------------------------|--|---|
| REVIEWED BY | | For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY |
|------------------------|--|---|

-----End of the test report-----



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|---|--|--------------------------|---|-----------------|
| <i>Name & Address of The Customer</i> | | REPORT NO | UES/TR/21-22/06264 | |
| TO, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/AAQM/010855-010862 | |
| | | DATE OF SAMPLING | 03/01/2022 to 31/01/2022 | |
| | | DATE OF RECEIPT | 04/01/2022 to 01/02/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 05/01/2022 | END: 02/02/2022 |
| | | SAMPLE DETAILS | | |
| MONITORING FOR | AMBIENT AIR QUALITY MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | BATSARA VILLAGE (BUFFER ZONE) | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO. | | | |

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

| Parameter | Method Reference | NAAQM Standard |
|--|--|----------------|
| Particulate Matter size less than 10 microns (PM ₁₀) | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I | 100 |
| Particulate Matter size less than 2.5 microns (PM _{2.5}) | CPCB Guidelines Vol.-I | 60 |
| Sulphur Dioxide (SO ₂) | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80 |
| Nitrogen Dioxide (NO ₂) | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I | 80 |
| Carbon Monoxide (CO)* | IS 5182 (Part 10): 1999, RA 2003 | 4.0 |
| Mercury (Hg) | EPA Method IO-5 | -- |

TEST REPORT

| Date of Sampling | PM ₁₀ µg/m ³ | PM _{2.5} µg/m ³ | SO ₂ µg/m ³ | NO ₂ µg/m ³ | CO* mg/m ³ | Hg ng/m ³ |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022 | 68 | 28 | 10 | 20 | 1.2 | N.D. |
| 07.01.2022 | 74 | 25 | 14 | 28 | 1.1 | N.D. |
| 11.01.2022 | 68 | 34 | 18 | 22 | 1.0 | N.D. |
| 14.01.2022 | 72 | 22 | 12 | 24 | 0.9 | N.D. |
| 17.01.2022 | 68 | 28 | 06 | 28 | 0.5 | N.D. |
| 24.01.2022 | 56 | 30 | 08 | 22 | 0.8 | N.D. |
| 28.01.2022 | 52 | 26 | 14 | 26 | 0.7 | N.D. |
| 31.01.2022 | 68 | 32 | 10 | 28 | 0.9 | N.D. |

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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| REVIEWED BY | For ULTIMATE ENVIROLYTICAL SOLUTIONS | AUTHORIZED SIGNATORY |
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-----End of the test report-----



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|---|--|-------------------------------------|---|------------------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06265 | |
| TO, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/AAQM/010863-010870 | |
| | | DATE OF SAMPLING | 03/01/2022 to 31/01/2022 | |
| | | DATE OF RECEIPT | 04/01/2022 to 01/02/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 05/01/2022 | END: 02/02/2022 |
| | | SAMPLE DETAILS | | |
| MONITORING FOR | AMBIENT AIR QUALITY MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | SIKKA VILLAGE (BUFFER ZONE) | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO. | | | |

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

| Parameter | Method Reference | NAAQM Standard |
|--|--|----------------|
| Particulate Matter size less than 10 microns (PM ₁₀) | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I | 100 |
| Particulate Matter size less than 2.5 microns (PM _{2.5}) | CPCB Guidelines Vol.-I | 60 |
| Sulphur Dioxide (SO ₂) | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80 |
| Nitrogen Dioxide (NO ₂) | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I | 80 |
| Carbon Monoxide (CO)* | IS 5182 (Part 10): 1999, RA 2003 | 4.0 |
| Mercury (Hg) | EPA Method IO-5 | --- |

TEST REPORT

| Date of Sampling | PM ₁₀ µg/m ³ | PM _{2.5} µg/m ³ | SO ₂ µg/m ³ | NO ₂ µg/m ³ | CO* mg/m ³ | Hg ng/m ³ |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022 | 70 | 22 | 18 | 28 | 1.0 | N.D. |
| 07.01.2022 | 74 | 26 | 12 | 22 | 0.9 | N.D. |
| 11.01.2022 | 68 | 24 | 08 | 26 | 0.2 | N.D. |
| 14.01.2022 | 58 | 28 | 16 | 25 | 0.8 | N.D. |
| 17.01.2022 | 74 | 32 | 08 | 24 | 1.5 | N.D. |
| 24.01.2022 | 62 | 20 | 12 | 28 | 1.2 | N.D. |
| 28.01.2022 | 58 | 26 | 18 | 22 | 0.9 | N.D. |
| 31.01.2022 | 64 | 28 | 12 | 26 | 0.4 | N.D. |

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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- > This is for information as the party has asked for above test(s) only.

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-----End of the test report-----



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|---|--|-------------------------------------|---|-----------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06266 | |
| TO, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/AAQM/010871-010878 | |
| | | DATE OF SAMPLING | 03/01/2022 to 31/01/2022 | |
| | | DATE OF RECEIPT | 04/01/2022 to 01/02/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 05/01/2022 | END: 02/02/2022 |
| | | SAMPLE DETAILS | | |
| MONITORING FOR | AMBIENT AIR QUALITY MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | MINES OFFICE NEAR VTC (CORE ZONE) | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO. | | | |

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

| Parameter | Method Reference | NAAQM Standard |
|--|--|----------------|
| Particulate Matter size less than 10 microns (PM ₁₀) | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I | 100 |
| Particulate Matter size less than 2.5 microns (PM _{2.5}) | CPCB Guidelines Vol.-I | 60 |
| Sulphur Dioxide (SO ₂) | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80 |
| Nitrogen Dioxide (NO ₂) | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I | 80 |
| Carbon Monoxide (CO)* | IS 5182 (Part 10): 1999, RA 2003 | 4.0 |
| Mercury (Hg) | EPA Method IO-5 | -- |

TEST REPORT

| Date of Sampling | PM ₁₀ µg/m ³ | PM _{2.5} µg/m ³ | SO ₂ µg/m ³ | NO ₂ µg/m ³ | CO* mg/m ³ | Hg ng/m ³ |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022 | 64 | 24 | 12 | 24 | 1.0 | N.D. |
| 07.01.2022 | 62 | 26 | 14 | 28 | 0.8 | N.D. |
| 11.01.2022 | 58 | 22 | 18 | 20 | 1.2 | N.D. |
| 14.01.2022 | 66 | 28 | 10 | 24 | 1.4 | N.D. |
| 17.01.2022 | 72 | 26 | 12 | 28 | 0.9 | N.D. |
| 24.01.2022 | 68 | 22 | 18 | 22 | 1.0 | N.D. |
| 28.01.2022 | 64 | 28 | 12 | 28 | 0.9 | N.D. |
| 31.01.2022 | 62 | 20 | 16 | 22 | 1.4 | N.D. |

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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- This is for information as the party has asked for above test(s) only.

[Signature]
02/02/22

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

[Signature]
02/02/22

AUTHORIZED SIGNATORY

-----End of the test report-----



HDD-272, Phase III - Near JP Chowk
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|---|--|-------------------------------------|---|-----------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06268 | |
| TO, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/AAQM/010879-010886 | |
| | | DATE OF SAMPLING | 03/01/2022 to 31/01/2022 | |
| | | DATE OF RECEIPT | 04/01/2022 to 01/02/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 05/01/2022 | END: 02/02/2022 |
| | | SAMPLE DETAILS | | |
| MONITORING FOR | AMBIENT AIR QUALITY MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | NEAR MAIN GATE (CORE ZONE) | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO. | | | |

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

| Parameter | Method Reference | NAAQM Standard |
|--|--|----------------|
| Particulate Matter size less than 10 microns (PM ₁₀) | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I | 100 |
| Particulate Matter size less than 2.5 microns (PM _{2.5}) | CPCB Guidelines Vol.-I | 60 |
| Sulphur Dioxide (SO ₂) | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80 |
| Nitrogen Dioxide (NO ₂) | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I | 80 |
| Carbon Monoxide (CO)* | IS 5182 (Part 10): 1999, RA 2003 | 4.0 |
| Mercury (Hg) | EPA Method IO-5 | -- |

TEST REPORT

| Date of Sampling | PM ₁₀ µg/m ³ | PM _{2.5} µg/m ³ | SO ₂ µg/m ³ | NO ₂ µg/m ³ | CO* mg/m ³ | Hg ng/m ³ |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022 | 72 | 28 | 16 | 22 | 0.7 | N.D. |
| 07.01.2022 | 68 | 26 | 12 | 28 | 0.8 | N.D. |
| 11.01.2022 | 76 | 30 | 18 | 26 | 1.0 | N.D. |
| 14.01.2022 | 64 | 34 | 12 | 20 | 1.2 | N.D. |
| 17.01.2022 | 60 | 28 | 16 | 28 | 0.8 | N.D. |
| 24.01.2022 | 78 | 34 | 10 | 25 | 1.4 | N.D. |
| 28.01.2022 | 66 | 22 | 18 | 24 | 1.6 | N.D. |
| 31.01.2022 | 72 | 36 | 14 | 22 | 0.8 | N.D. |

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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| 02/02/22 REVIEWED BY | | For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/02/22 AUTHORIZED SIGNATORY |
|------------------------------------|--|---|

-----End of the test report-----



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|--|--|-------------------------------------|---|------------------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06268 | |
| TO, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT.- PALAMU (JH) | | LAB REF NO | UES/21-22/AAQM/010887-010894 | |
| | | DATE OF SAMPLING | 03/01/2022 to 31/01/2022 | |
| | | DATE OF RECEIPT | 04/01/2022 to 01/02/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 05/01/2022 | END: 02/02/2022 |
| | | SAMPLE DETAILS | | |
| MONITORING FOR | AMBIENT AIR QUALITY MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | NEAR DG STACK (CORE ZONE) | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO. | | | |

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

| Parameter | Method Reference | NAAQM Standard |
|--|--|----------------|
| Particulate Matter size less than 10 microns (PM ₁₀) | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I | 100 |
| Particulate Matter size less than 2.5 microns (PM _{2.5}) | CPCB Guidelines Vol.-I | 60 |
| Sulphur Dioxide (SO ₂) | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80 |
| Nitrogen Dioxide (NO ₂) | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I | 80 |
| Carbon Monoxide (CO)* | IS 5182 (Part 10): 1999, RA 2003 | 4.0 |
| Mercury (Hg) | EPA Method IO-5 | -- |

TEST REPORT

| Date of Sampling | PM ₁₀ µg/m ³ | PM _{2.5} µg/m ³ | SO ₂ µg/m ³ | NO ₂ µg/m ³ | CO* mg/m ³ | Hg ng/m ³ |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022 | 74 | 22 | 12 | 24 | 0.9 | N.D. |
| 07.01.2022 | 60 | 26 | 14 | 22 | 0.8 | N.D. |
| 11.01.2022 | 64 | 28 | 18 | 24 | 1.2 | N.D. |
| 14.01.2022 | 78 | 22 | 16 | 20 | 0.9 | N.D. |
| 17.01.2022 | 64 | 24 | 12 | 26 | 1.4 | N.D. |
| 24.01.2022 | 60 | 28 | 10 | 22 | 0.7 | N.D. |
| 28.01.2022 | 58 | 22 | 16 | 28 | 0.6 | N.D. |
| 31.01.2022 | 66 | 30 | 18 | 30 | 0.4 | N.D. |

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

- > The report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

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|---|---|--|
|  REVIEWED BY |  | <p>For ULTIMATE ENVIROLYTICAL SOLUTIONS</p>  AUTHORIZED SIGNATORY |
|---|---|--|

-----End of the test report-----



HDD-272, Phase III - Near JP Chowk
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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| | | | | |
|---|--|--------------------------|---|-----------------|
| Name & Address Of The Customer | | REPORT NO | UES/TR/21-22/06269 | |
| TO, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/AAQM/010895-010902 | |
| | | DATE OF SAMPLING | 03/01/2022 to 31/01/2022 | |
| | | DATE OF RECEIPT | 04/01/2022 to 01/02/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 05/01/2022 | END: 02/02/2022 |
| | | SAMPLE DETAILS | | |
| MONITORING FOR | AMBIENT AIR QUALITY MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | NEAR SUBSTATION(CORE ZONE) | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO. | | | |

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

| Parameter | Method Reference | NAAQM Standard |
|--|--|----------------|
| Particulate Matter size less than 10 microns (PM ₁₀) | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I | 100 |
| Particulate Matter size less than 2.5 microns (PM _{2.5}) | CPCB Guidelines Vol.-I | 60 |
| Sulphur Dioxide (SO ₂) | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80 |
| Nitrogen Dioxide (NO ₂) | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I | 80 |
| Carbon Monoxide (CO)* | IS 5182 (Part 10): 1999, RA 2003 | 4.0 |
| Mercury (Hg) | EPA Method IO-5 | -- |

TEST REPORT

| Date of Sampling | PM ₁₀ µg/m ³ | PM _{2.5} µg/m ³ | SO ₂ µg/m ³ | NO ₂ µg/m ³ | CO* mg/m ³ | Hg ng/m ³ |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022 | 76 | 22 | 12 | 24 | 0.6 | N.D. |
| 07.01.2022 | 62 | 38 | 10 | 22 | 0.8 | N.D. |
| 11.01.2022 | 68 | 26 | 14 | 26 | 0.9 | N.D. |
| 14.01.2022 | 64 | 28 | 10 | 20 | 0.7 | N.D. |
| 17.01.2022 | 76 | 34 | 18 | 26 | 1.2 | N.D. |
| 24.01.2022 | 62 | 30 | 14 | 24 | 0.8 | N.D. |
| 28.01.2022 | 88 | 36 | 12 | 22 | 0.6 | N.D. |
| 31.01.2022 | 60 | 30 | 10 | 24 | 0.2 | N.D. |

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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- > This is for information as the party has asked for above test(s) only.

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| 02/02/22 REVIEWED BY | | For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/02/22 AUTHORIZED SIGNATORY |
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-----End of the test report-----



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| | | | | |
|---|--|--------------------------|---|-----------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06270 | |
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/FE/010903 | |
| | | DATE OF SAMPLING | 27/01/2022 | |
| | | DATE OF RECEIPT | 28/01/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 28/01/2022 | END: 02/02/2022 |
| SAMPLE DETAILS | | | | |
| MONITORING FOR | WORK ZONE MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | MINING PHASE PIT "A" | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | GMF FILTER PAPER (8 X 10 INCH) : 1X1 NO. | | | |

TEST REPORT

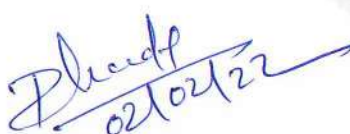

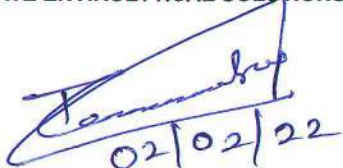
| SR. NO. | PARAMETER | UNIT | RESULT | As per MOEF Notification (350-1) | METHOD REFERENCE |
|---------|---|--------------------------|--------|----------------------------------|-------------------|
| 1 | Total Suspended Particulate Matter (as SPM) | $\mu\text{g}/\text{m}^3$ | 316 | 500 | EPA Method IO-2.1 |

Note: All results are on the basis of 24-hour sampling.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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- > This is for information as the party has asked for above test(s) only.

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|  REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY |
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-----End of the test report-----



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|---|--|--------------------------|---|-----------------|--|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06271 | | |
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/FE/010904 | | |
| | | DATE OF SAMPLING | 27/01/2022 | | |
| | | DATE OF RECEIPT | 28/01/2022 | | |
| | | DATE OF REPORT | 02/02/2022 | | |
| | | DATE OF ANALYSIS | START: 28/01/2022 | END: 02/02/2022 | |
| | | SAMPLE DETAILS | | | |
| MONITORING FOR | WORK ZONE MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | | |
| SAMPLING LOCATION | PIT "B" | | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | | |
| SAMPLE QUANTITY/PACKING | GMF FILTER PAPER (8 X 10 INCH) : 1X1 NO. | | | | |

TEST REPORT

| SR. NO. | PARAMETER | UNIT | RESULT | As per MOEF Notification (350-1) | METHOD REFERENCE |
|---------|---|--------------------------|--------|----------------------------------|-------------------|
| 1 | Total Suspended Particulate Matter (as SPM) | $\mu\text{g}/\text{m}^3$ | 288 | 500 | EPA Method IO-2.1 |

Note: All results are on the basis of 24-hour sampling.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

- > The report for publication, arbitration or as legal dispute is forbidden.
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| 02/02/22 REVIEWED BY | | For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/02/22 AUTHORIZED SIGNATORY |
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-----End of the test report-----



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|---|---|-------------------------------------|---|------------------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06272 | |
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/FE/010905 | |
| | | DATE OF SAMPLING | 27/01/2022 | |
| | | DATE OF RECEIPT | 28/01/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 28/01/2022 | END: 02/02/2022 |
| | | SAMPLE DETAILS | | |
| MONITORING FOR | WORK ZONE MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | PIT "C" | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | GMF FILTER PAPER (8 X 10 INCH): 1X1 NO. | | | |

TEST REPORT

| SR. NO. | PARAMETER | UNIT | RESULT | As per MOEF Notification (350-1) | METHOD REFERENCE |
|---------|---|-------------------|--------|----------------------------------|-------------------|
| 1 | Total Suspended Particulate Matter (as SPM) | µg/m ³ | 416 | 500 | EPA Method IO-2.1 |

Note: All results are on the basis of 24-hour sampling.

REMARKS: RESULTS ARE AS ABOVE

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| 02/02/22 | | For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/02/22 |
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-----End of the test report-----



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|---|--|--------------------------|---|-----------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06273 | |
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/FE/010906 | |
| | | DATE OF SAMPLING | 27/01/2022 | |
| | | DATE OF RECEIPT | 28/01/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 28/01/2022 | END: 02/02/2022 |
| SAMPLE DETAILS | | | | |
| MONITORING FOR | WORK ZONE MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | DUMP YARD EXTERNAL | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | GMF FILTER PAPER (8 X 10 INCH) : 1X1 NO. | | | |

TEST REPORT

| SR. NO. | PARAMETER | UNIT | RESULT | As per MOEF Notification (350-1) | METHOD REFERENCE |
|---------|---|--------------------------|--------|----------------------------------|-------------------|
| 1 | Total Suspended Particulate Matter (as SPM) | $\mu\text{g}/\text{m}^3$ | 386 | 500 | EPA Method IO-2.1 |

Note: All results are on the basis of 24-hour sampling.

REMARKS: RESULTS ARE AS ABOVE

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| 02/02/22 REVIEWED BY | | For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/02/22 AUTHORIZED SIGNATORY |
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-----End of the test report-----



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| | | | | |
|---|--|--------------------------|---|-----------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06273 | |
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/FE/010907 | |
| | | DATE OF SAMPLING | 27/01/2022 | |
| | | DATE OF RECEIPT | 28/01/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 28/01/2022 | END: 02/02/2022 |
| SAMPLE DETAILS | | | | |
| MONITORING FOR | WORK ZONE MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | COAL STOCK YARD | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | GMF FILTER PAPER (8 X 10 INCH) : 1X1 NO. | | | |

TEST REPORT

| SR. NO. | PARAMETER | UNIT | RESULT | As per MOEF Notification (350-1) | METHOD REFERENCE |
|---------|---|--------------------------|--------|----------------------------------|-------------------|
| 1 | Total Suspended Particulate Matter (as SPM) | $\mu\text{g}/\text{m}^3$ | 428 | 500 | EPA Method IO-2.1 |

Note: All results are on the basis of 24-hour sampling.

REMARKS: RESULTS ARE AS ABOVE

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| 02/02/22 REVIEWED BY | | For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/02/22 AUTHORIZED SIGNATORY |
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-----End of the test report-----



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|---|---|--------------------------|---|-----------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06274 | |
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/FE/010907 | |
| | | DATE OF SAMPLING | 27/01/2022 | |
| | | DATE OF RECEIPT | 28/01/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 28/01/2022 | END: 02/02/2022 |
| | | SAMPLE DETAILS | | |
| MONITORING FOR | WORK ZONE MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | HAUL ROAD | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | GMF FILTER PAPER (8 X 10 INCH): 1X1 NO. | | | |

TEST REPORT

| SR. NO. | PARAMETER | UNIT | RESULT | As per MOEF Notification (350-1) | METHOD REFERENCE |
|---------|---|--------------------------|--------|----------------------------------|-------------------|
| 1 | Total Suspended Particulate Matter (as SPM) | $\mu\text{g}/\text{m}^3$ | 396 | 500 | EPA Method IO-2.1 |

Note: All results are on the basis of 24-hour sampling.

REMARKS: RESULTS ARE AS ABOVE

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|------------------------------------|--|---|
| 02/02/22 REVIEWED BY | | For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/02/22 AUTHORIZED SIGNATORY |
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-----End of the test report-----



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|---|---|-------------------------------------|---|------------------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06275 | |
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/FE/010908 | |
| | | DATE OF SAMPLING | 27/01/2022 | |
| | | DATE OF RECEIPT | 28/01/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 28/01/2022 | END: 02/02/2022 |
| SAMPLE DETAILS | | | | |
| MONITORING FOR | WORK ZONE MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | RAJHARA RAILWAY SIDEING | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | GMF FILTER PAPER (8 X 10 INCH): 1X1 NO. | | | |

TEST REPORT

| SR. NO. | PARAMETER | UNIT | RESULT | As per MOEF Notification (350-1) | METHOD REFERENCE |
|---------|---|--------------------------|--------|----------------------------------|-------------------|
| 1 | Total Suspended Particulate Matter (as SPM) | $\mu\text{g}/\text{m}^3$ | 448 | 500 | EPA Method IO-2.1 |

Note: All results are on the basis of 24-hour sampling.

REMARKS: RESULTS ARE AS ABOVE

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-----End of the test report-----



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|---|--|--------------------------|---|-----------------|
| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06276 | |
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/FE/010909 | |
| | | DATE OF SAMPLING | 27/01/2022 | |
| | | DATE OF RECEIPT | 28/01/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 28/01/2022 | END: 02/02/2022 |
| SAMPLE DETAILS | | | | |
| MONITORING FOR | WORK ZONE MONITORING | CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058 DATE: 30-SEP-2021 | |
| SAMPLING LOCATION | TRUCK PARKING ZONE | | | |
| DURATION OF SAMPLING | 24 HOURS | SAMPLE COLLECTED BY | LABORATORY CHEMIST | |
| SAMPLING PROCEDURE | AS PER METHOD REFERENCE | | | |
| SAMPLE QUANTITY/PACKING | GMF FILTER PAPER (8 X 10 INCH) : 1X1 NO. | | | |

TEST REPORT

| SR. NO. | PARAMETER | UNIT | RESULT | As per MOEF Notification (350-1) | METHOD REFERENCE |
|---------|---|--------------------------|--------|----------------------------------|-------------------|
| 1 | Total Suspended Particulate Matter (as SPM) | $\mu\text{g}/\text{m}^3$ | 384 | 500 | EPA Method IO-2.1 |

Note: All results are on the basis of 24-hour sampling.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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-----End of the test report-----



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| <i>Name & Address Of The Customer</i> | | REPORT NO | UES/TR/21-22/06277 |
|---|---|------------------|---------------------------|
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | LAB REF NO | UES/21-22/N/010910-010917 |
| | | DATE OF REPORT | 02/02/2022 |
| | | DATE OF SAMPLING | 27/01/2022 to 28/01/2022 |
| SAMPLE DETAILS | | | |
| MONITORING FOR | NOISE LEVEL MONITORING | | |
| CUSTOMER REF. NO. & DATE | K/PO/SRV/2122/0058, DATE:30-SEP-2021 | | |
| SAMPLING LOCATION | INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW) | | |
| SAMPLE COLLECTED BY | LABORATORY CHEMIST | | |
| SAMPLING PROCEDURE | MANUFACTURER'S INSTRUCTION | | |

| TEST REPORT | | | | | |
|-----------------------------|-------|----------|------------|--------------------------|------------|
| LOCATION | UNIT | RESULT | | LIMIT (INDUSTRIAL ZONE) | |
| | | DAY TIME | NIGHT TIME | DAY TIME | NIGHT TIME |
| Inside Plant | | | | | |
| MINES OFFICE NEAR VTC | dB(A) | 62.6 | 54.0 | 75 | 70 |
| NEAR MAIN GATE | dB(A) | 64.8 | 48.6 | | |
| NEAR DG STACK | dB(A) | 58.2 | 52.2 | | |
| NEAR SUBSTATION | dB(A) | 56.8 | 44.9 | | |
| LOCATION | UNIT | RESULT | | LIMIT (RESIDENTIAL ZONE) | |
| | | DAY TIME | NIGHT TIME | DAY TIME | NIGHT TIME |
| Outside Plant | | | | | |
| R & R COLONY, CHANDAN NAGAR | dB(A) | 52.8 | 38.6 | 55 | 45 |
| KATHAUTIYA VILLAGE | dB(A) | 48.2 | 36.8 | | |
| BATSARA VILLAGE | dB(A) | 40.5 | 32.2 | | |
| SIKKA VILLAGE | dB(A) | 46.8 | 38.4 | | |

REMARKS: RESULTS ARE AS ABOVE

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| | | |
|--------------|--|--|
| 02/02/22 | | For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/02/22 |
| REVIEWED BY | | AUTHORIZED SIGNATORY |

-----End of the test report-----



HDD-272, Phase III - Near JP Chowk
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

| | | | | |
|---|---|-----------------------------|--------------------------------------|-----------------|
| To, HINDALCO INDUSTRIES LIMITED, KATHAUTIA OPEN CAST COAL MINES, POST - NAUDIHA, P.S. PANDWA, DALTONGANJ, DISTT. - PALAMU (JH) | | REPORT NO | UES/TR/21-22/06278 | |
| | | LAB REF NO | UES/21-22/W/010918-010919 | |
| | | DATE OF SAMPLING | 27/01/2022 | |
| | | DATE OF RECEIPT | 28/01/2022 | |
| | | DATE OF REPORT | 02/02/2022 | |
| | | DATE OF ANALYSIS | START: 28/01/2022 | END: 02/02/2022 |
| SAMPLE DETAILS | | | | |
| Customer Sample ID | 1. Sump Water Pit-D 2. Workshop ETP Water | Customer Ref. No. & Date | K/PO/SRV/2122/0058, Date:30-Sep-2021 | |
| Sample Type | Effluent Water | Sample Condition At Receipt | Ok | |
| Packing Of Sample | Jerry Cane (3 ltr.*2) Glass bottle (300 ml.*2) | Sample Collected By | Laboratory Chemist | |
| Other Details | Sealed | Quantity Received | Approx. 3.3 Ltr. | |

REPORT NO.- 06278

TEST REPORT

| SR. NO. | PARAMETER | UNIT | METHOD OF TEST | THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER | SUMP WATER PIT-D | WORKSHO P ETP WATER |
|---------|----------------------------|-------|---|--|------------------|---------------------|
| 1 | Colour | Hazen | APHA 22 nd Ed. 2012,2120-B,2-6 | See 6 of Annexure-I | <1 | <1 |
| 2 | Odour | - | APHA 22 nd Ed. 2012,2120-B,2-6 | See 6 of Annexure-I | Agreeable | Agreeable |
| 3 | Temperature | °C | APHA 22 nd Ed.2012,2130-B,2-13 | Shall not exceed 5°C above the receiving water temperature | 24.6 | 28.4 . |
| 4 | pH | - | APHA 22 nd Ed.2012,4500-H ⁺ -B,4-92 | 5.5 to 9.0 | 7.18 | 7.22 |
| 5 | Total Residual Chlorine | mg/L | APHA 22 nd Ed.2012,4500-Cl-G,4-69 | 1.0 | N.D. | N.D. |
| 6 | Total Suspended Solids | mg/L | APHA 22 nd Ed.2012,2540- D, 2-66 | 100 | 86.0 | 102.0 |
| 7 | Dissolved Phosphate (as P) | mg/L | APHA 22 nd Ed.2012,4500-P-C, 4-153 | 5.0 | N.D. | N.D. |
| 8 | Fluoride (as F) | mg/L | APHA 22 nd Ed.2012,4500-F-B&D,4-84 & 87 | 2.0 | 0.14 | 0.08 |
| 9 | Lead (as Pb) | mg/L | APHA 22 nd Ed.2012,3111-B, 3-18 | 0.1 | N.D. | N.D. |
| 10 | Zinc (as Zn) | mg/L | APHA 22 nd Ed.2012,3111-B, 3-18 | 5.0 | 0.18 | 0.25 |
| 11 | Copper (as Cu) | mg/L | APHA 22 nd Ed.2012,3111-B, 3-18 | 3.0 | N.D. | N.D. |
| 12 | Cadmium (as Cd) | mg/L | APHA 22 nd Ed.2012,3500-Cd, 3-105 | 2.0 | N.D. | N.D. |
| 13 | Mercury (as Hg) | mg/L | APHA 22 nd Ed.2012,3112-B, 3-23 | 0.01 | N.D. | N.D. |



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TEST REPORT

| SR. NO. | PARAMETER | UNIT | METHOD OF TEST | THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER | SUMP WATER PIT-D | WORKSHO P ETP WATER |
|---------|--|------|--|--|------------------|---------------------|
| 14 | Arsenic (as As) | mg/L | APHA 22 nd Ed.2012, 3114-C, 3-38 | 0.2 | N.D. | N.D. |
| 15 | Selenium (as Se) | mg/L | APHA 22 nd Ed.2012, 3114-C, 3-38 | 0.05 | N.D. | N.D. |
| 16 | Total Chromium (as Cr) | mg/L | APHA 22 nd Ed.2012, 3500-Cr-B, 3-69 | 2.0 | N.D. | N.D. |
| 17 | Chemical Oxygen Demand (COD) | mg/L | APHA 22 nd Ed.2012, 5520-B, 5-17 | 250 | 134.0 | 94.0 |
| 18 | Biochemical Oxygen Demand (BOD) | mg/L | IS 3025 (Part 44):1993, RA 2003 | 30 | 16.4 | 8.4 |
| 19 | Oil & Grease | mg/L | IS 3025 (Part 39):1991, RA 2003, | 10.0 | N.D. | N.D. |
| 20 | Phenolic Compounds (as C ₆ H ₅ OH) | mg/L | IS 3025 (Part 43):1992, RA 2003 | 1.0 | N.D. | N.D. |
| 21 | Total Dissolved Solids (as TDS) | mg/L | IS 3025 (part-16):1984, RA 2006 | - | 256.0 | 328.4 |

Note: mg/lit.: milligram per liter., N.D.: Not Detected

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| | | |
|------------------------|--|---|
| REVIEWED BY | | For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY |
|------------------------|--|---|

-----End of the test report-----