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Report No.: ENV/SCFL/ML/24-25/AA-02 Order No.: SCFL/HR/2023-24/13

Date : 05/06/2024 Date : 30/01/2024

Report Issued To: SHYAM CENTURY FERROUS LIMITED

EPIP, Rajabagan, Byrnihat, Meghalaya-793101

# **AMBIENT AIR QUALITY TEST RESULTS**

| Sl. No. | LOCATION(S) ↓                   | Date of<br>Sampling | <b>PM 2.5</b> (μg/m³) | <b>PM 10</b> (μg/m³) | <b>SO</b> <sub>2</sub> (μg/m <sup>3</sup> ) | <b>NO</b> <sub>2</sub><br>(μg/m³) |
|---------|---------------------------------|---------------------|-----------------------|----------------------|---|-----------------------------------|
|         | LIMIT(S) →                      |                     | 60                    | 100                  | 80  | 80                                |
| 01      | Near Administrative<br>Building | 24.05.2024          | 27.1                  | 58.2                 | 11.9  | 13.4                              |
| 02      | Near DM Plant                   | 24.05.2024          | 24.7                  | 55.4                 | 8.8   | 11.6                              |

Analysis Protocol: IS 5182



Checked By: Mr. Pankaj Baroi, ENVIROCON

- 2. Results refer only to the particular parameters tested.
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# **PROCESS FUGITIVE EMISSION TEST RESULTS**

| Sl. No. | Locations                     | Date of<br>Sampling | <b>SPM</b><br>(μg/m³) | Limits<br>(μg/m³) |  |
|---------|-------------------------------|---------------------|-----------------------|-------------------|--|
| 01      | Near CPP Area                 | 25.05.2024          | 592                   | 2000              |  |
| 02      | Near Ferro-Alloy Furnace Area | 25.05.2024          | 711                   | 2000              |  |

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# **AMBIENT NOISE LEVEL MEASUREMENT RESULTS**

| Sl. No. | Location(s)                      | Date       | Day Time       |                |                        | Night Time     |                |                           |
|---------|----------------------------------|------------|----------------|----------------|------------------------|----------------|----------------|---------------------------|
|         |                                  |            | Max.<br>(dB-A) | Min.<br>(dB-A) | L <sub>eq</sub> (dB-A) | Max.<br>(dB-A) | Min.<br>(dB-A) | L <sub>eq</sub><br>(dB-A) |
| 1       | Near Ferro-Alloy Furnace<br>Area | 24.05.2024 | 76             | 65             | 71                     | 67             | 55             | 58                        |
| 2       | Near Weigh Bridge                | 24.05.2024 | 69             | 52             | 62                     | 54             | 41             | 48                        |
| 3       | Near CPP Tower                   | 24.05.2024 | 68             | 53             | 61                     | 62             | 47             | 56                        |

Limit: Day Time- 75 dB(A), Night Time- 70 dB(A)



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# **STACK EMISSION TEST RESULTS**

| Sample No                | ).                                       |                  | SCFL/2024/SE-05/01                  |               |                           |  |  |
|--------------------------|--|------------------|-------------------------------------|---------------|---------------------------|--|--|
| Date of Sampling         |  |                  | 24.05.2024                          |               |                           |  |  |
| Sample Collected From    |  |                  | Stack Attached To Ferro-Alloy Stack |               |                           |  |  |
|                          | PHYSICA                                  | AL INSPECTION R  | EPORT OF THE STACK                  |               |                           |  |  |
| Material of Construction |  |                  | M. S.                               |               |                           |  |  |
| Height of t              | he Stack (Meter)                         |                  | 40 (approx.)                        |               |                           |  |  |
| Stack Dian               | Stack Diameter at Sampling Point (Meter) |                  |                                     | 1.8 (approx.) |                           |  |  |
| Fuel Used                |  |                  | Not Applicable                      |               |                           |  |  |
|                          | R  | RESULTS OF STACE | K MONITORING                        |               |                           |  |  |
| Sl. No.                  | Parameter(s)                             | Unit(s)          | Result(s)                           | Limit(s)      | Analysis<br>Protocol(s)   |  |  |
| 1.                       | Flue Gas Temperature                     | °C               | 142                                 |               | IS 11255; Part 3          |  |  |
| 2.                       | Flue Gas Velocity                        | m/sec            | 10.5                                |               | IS 11255; Part 3          |  |  |
| 3. Flow Rate Nm³/hr      |  | 69080            | IS 11255;                           |               |                           |  |  |
| 4.                       | Particulate Matter                       | mg/Nm³           | 17                                  | 50            | IS 11255; Part 1          |  |  |
| 5.                       | Oxides of Sulphur (as SO <sub>2</sub> )  | ppm              | 6                                   |               | Electrochemical<br>Sensor |  |  |
| 6.                       | Oxides of Nitrogen (as NO <sub>x</sub> ) | ppm              | 76                                  |               | Electrochemical<br>Sensor |  |  |



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**NOTE:** 1. Results reported are valid at the time of and under the prevailing conditions of measurement.

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# **STP WATER ANALYSIS RESULTS**

Sample Ref. No.: SCFL/2024/STP-2605/01 Sample Source : STP Outlet (SCFL) Sample Type : STP Treated Water

Collected On : 26-05-2024 Received On : 27-05-2024 Collected By : ENVIROCON Representative

| Sl. No. | Parameters                               | Results | Limit<br>[G.S.R. 1265 (E), 2017] |
|---------|--|---------|----------------------------------|
| 1       | рН                                       | 7.18    | 6.5 - 9.0                        |
| 2       | Biochemical Oxygen Demand (as BOD), mg/l | 16      | 30                               |
| 3       | Total Suspended Solids (as TSS), mg/l    | 14      | <100                             |
| 4       | Fecal Coliform (as FC), MPN/100 ml       | 580     | <1000                            |

Analysis Protocol: IS 3025 MPN: Most Probable Number



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# **SURFACE WATER ANALYSIS RESULTS**

Sample Ref. No. : SCFL/2024/SW-2605/01 Sample Source : Ummatur River Sample Type : Surface Water

Collected On : 26-05-2024 Received On : 27-05-2024 Collected By : ENVIROCON Representative

| Sl. No. | Parameters   | Results   | Acceptable Limit* | Permissible Limit*<br>in the Absence of<br>Alternate Source |
|---------|--|-----------|-------------------|---|
| 1.      | Colour, Hazen Units, Max.                          | 10        | 5                 | 15  |
| 2.      | Odour  | Agreeable | Agreeable         | Agreeable   |
| 3.      | Temperature  | 26.9      |                   |   |
| 4.      | pH Value   | 6.77      | 6.5 - 8.5         | No Relaxation   |
| 5.      | Suspended Solids                                   | 36        |                   |   |
| 6.      | Total Dissolved Solids, mg/l, Max.                 | 78        | 500               | 2000  |
| 7.      | Conductivity, µS/cm                                | 121       |                   |   |
| 8.      | Dissolved Oxygen, mg/l, Min.                       | 5.6       |                   |   |
| 9.      | Biochemical Oxygen Demand, mg/l, Max.              | <1.0      |                   |   |
| 10.     | Chemical Oxygen Demand, mg/l, Max.                 | 25        |                   |   |
| 11.     | Oil and Grease, mg/l, Max.                         | <4.0      |                   |   |
| 12.     | Residual Chlorine, mg/l, Min.                      | < 0.01    | 0.2               | 1   |
| 13.     | Total Hardness (as CaCO <sub>3</sub> ), mg/l, Max. | 8.1       | 200               | 600   |
| 14.     | Calcium (as Ca), mg/l, Max.                        | 4         | 75                | 200   |
| 15.     | Magnesium (as Mg), mg/l, Max.                      | <1.0      | 30                | 100   |
| 16.     | Iron (as Fe), mg/l, Max.                           | < 0.001   | 0.3               | No Relaxation   |
| 17.     | Total Chromium, (as Cr), mg/l, Max                 | <0.001    | 0.05              | No Relaxation   |
| 18.     | Ammonical Nitrogen (as N), mg/l, Max.              | <0.1      |                   |   |
| 19.     | Total Kjeldahl Nitrogen (as NH3), mg/l, Max.       | <0.1      |                   |   |
| 20.     | Free Ammonia (as NH <sub>3</sub> ), mg/l, Max.     | <0.01     |                   |   |

<sup>\*</sup>Limits as per IS 10500:2012

Analysis Protocol: IS 3025



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