

The Sandur Manganese & Iron Ores Limited

(An ISO 9001:2015; ISO 14001:2015 and 45001:2018 certified company)
CIN: L85110KA1954PLC000759; Website: www.sandurgroup.com

REGISTERED OFFICE

'SATYALAYA', No.266
Ward No.1, Palace Road
Sandur - 583 119, Ballari District
Karnataka, India
Tel: +91 8395 260301/ 283173-199
Fax: +91 8395 260473



CORPORATE OFFICE

'SANDUR HOUSE', No.9
Bellary Road, Sadashivanagar
Bengaluru - 560 080
Karnataka, India
Tel: +91 80 4152 0176 - 79 / 4547 3000
Fax: +91 80 4152 0182

Ref No: SMIORE/PLANT/ENV/MR/2024-25/

09th December 2024

To,
The Environmental Officer,
Regional Office & Zonal office
Karnataka State Pollution Control Board
Sri Sai Sharan plaza, No. 71/A, 2nd floor,
Dam road, Hosapete- 583203, Vijayanagar District.

Subject: Submission of monthly environmental monitoring report for the month of **November-2024**.

Reference: 1) CFO No. AW-329576 PCB ID 29470 Dated 02.02.2022
2) Amended CFO No. AW-335581 PCB ID 29470 Dated 17.01.2023

Dear Sir,

With reference to the subject cited above, please find here with Environmental Monitoring reports of M/s The Sandur Manganese & Iron Ores Limited, Vyasankere, Hanumanahalli Post, 583222, Hosapete Taluk, Vijayanagara District., for the Period November-2024 for your kind perusal.

Kindly acknowledge receipt of the same.

Thanking you,

For The Sandur Manganese & Iron Ores Limited,

Parvatareddy Patil
Senior General Manager-Plant



Encl: Environmental Monitoring Report **November-2024**

MINES OFFICE: Deogiri - 583112, Sandur Taluk, Ballari District
Tel: +91 8395 271025 / 28 / 29 / 40; Fax: +91 8395 271066

PLANT OFFICE: Metal & Ferroalloy Plant, Vyasankere, Mariyammanahalli - 583 222, Hosapete Taluk, Vijayanagara District
Tel: +91 8394 244450 / 244335

ಸ್ವೀಕೃತಿ
ಕ.ರಾ.ಮಾ.ನಿ. ಮಂಡಳಿ
ಪ್ರಾದೇಶಿಕ ಕಛೇರಿ ವಿಜಯನಗರ ಹೊಸಪೇಟೆ
ಸಂಖ್ಯೆ/ದಿನಾಂಕ: 4-12-24 ಸಹಿ Mani Kantu Joshi

Page 1 of 1

ENVIRONMENTAL MONITORING REPORT

November, 2024

Project : The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant),
Vyasanakere, Hanumanahalli Village,
Hospet Taluk,

ENVIRONMENTAL LABORATORY

(Unit of Mineral Engineering Services)

(Accredited by NABL & MOEF&CC Under E(P) 1986)

#948, 2nd Cross, Kammanahalli Main Road,

St Thomas Town Post, Bangalore- 560 084, Karnataka,

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ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2025

TEST REPORT


AMBIENT AIR QUALITY

Table No. 1

| Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasnakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist , | | | | | | | |
|--|----------------|---|--|---|--|---|---|
| Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services) | | | | | | | |
| Station at & Code : A1, Near Existing AAQMS 01 (SMIORE Schools) | | | | | | | |
| Instrument Used : Envirotech APM 460BL Serial No. 2914-DTJ-2020 Envirotech APM -550, Serial No. 520-DTG-2017 | | | | | | | |
| Calibration due date of instrument : 24.03.2025 | | | | | | | |
| Duration : 24 Hrs | | | | | | | |
| Issue date : 02.12.2024 | | | | | | | |
| Reference IS 5182 & Lab SOP | | | | | | | |
| Date of Sampling | Lab Code | Sulphur Dioxide (SO ₂), µg/m ³ | Nitrogen Dioxide (NO ₂), µg/m ³ | PM ₁₀ , (µg/m ³) | PM _{2.5} , (µg/m ³) | Ammonia (NH ₃), µg/m ³ | Benzene (C ₆ H ₆), µg/m ³ |
| 08.11.2024 | N/24/11/3-0141 | 9 | 13 | 56 | 30 | <20 | <1 |
| 09.11.2024 | N/24/11/3-0217 | 5 | 10 | 51 | 28 | <20 | <1 |
| 15.11.2024 | N/24/11/4-0149 | 6 | 9 | 46 | 24 | <20 | <1 |
| 16.11.2024 | N/24/11/4-0213 | 11 | 12 | 30 | 19 | <20 | <1 |
| 18.11.2024 | N/24/11/5-0028 | 9 | 14 | 53 | 28 | <20 | <1 |
| 19.11.2024 | N/24/11/5-0068 | 11 | 18 | 57 | 35 | <20 | <1 |
| 25.11.2024 | N/24/11/5-0021 | 10 | 12 | 46 | 25 | <20 | <1 |
| 26.11.2024 | N/24/11/5-0086 | 9 | 14 | 52 | 29 | <20 | <1 |
| Limits for Industrial , Residential, Rural and other Areas | | 80 24 Hrs | 80 24 Hrs | 100 24 Hrs | 60 24 Hrs | 400 24 Hrs | 5 Annual |

| Date of Sampling | Lab Code | Lead (Pb), µg/m ³ | Nickel (Ni), ng/m ³ | Arsenic (As), ng/m ³ | Benzo(a) Pyrene (BaP), ng/m ³ | Carbon Monoxide* (CO), mg/m ³ | Ozone* (O ₃), µg/m ³ |
|---|----------------|------------------------------|--------------------------------|---------------------------------|--|--|---|
| 08.11.2024 | N/24/11/3-0141 | 0.22 | <0.1 | <0.5 | <0.5 | 0.35 | 25 |
| 09.11.2024 | N/24/11/3-0217 | 0.28 | <0.1 | <0.5 | <0.5 | 0.42 | 29 |
| 15.11.2024 | N/24/11/4-0149 | 0.22 | <0.1 | <0.5 | <0.5 | 0.29 | 24 |
| 16.11.2024 | N/24/11/4-0213 | 0.23 | <0.1 | <0.5 | <0.5 | 0.32 | 21 |
| 18.11.2024 | N/24/11/5-0028 | 0.29 | <0.1 | <0.5 | <0.5 | 0.32 | 26 |
| 19.11.2024 | N/24/11/5-0068 | 0.21 | <0.1 | <0.5 | <0.5 | 0.44 | 24 |
| 25.11.2024 | N/24/11/5-0021 | 0.15 | <0.1 | <0.5 | <0.5 | 0.29 | 23 |
| 26.11.2024 | N/24/11/5-0086 | 0.17 | <0.1 | <0.5 | <0.5 | 0.29 | 20 |
| Limits for Industrial , Residential, Rural and other Areas | | 1.0 24 Hrs | 20 Annual | 6 Annual | 1 Annual | 4 1 Hr | 180 1 Hr |

Note : * Parameters monitored for period of 1 hr


 ARSHIYA KOUSAR
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TEST REPORT

AMBIENT AIR QUALITY

Table No. 1

| Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist , | | | | | | | |
|---|----------------|---|--|---|--|---|---|
| Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services) | | | | | | | |
| Station at & Code : A1, Near Existing AAQMS 01 (SMIORE Schools) | | | | | | | |
| Instrument Used : Envirotech APM 460BL Serial No. 2914-DTJ-2020 Envirotech APM -550, Serial No. 520-DTG-2017 | | | | | | | |
| Calibration due date of instrument : 24.03.2025 | | | | | | | |
| Duration : 24 Hrs | | | | | | | |
| Issue date : 02.12.2024 | | | | | | | |
| Reference IS 5182 & Lab SOP | | | | | | | |
| Date of Sampling | Lab Code | Sulphur Dioxide (SO ₂), µg/m ³ | Nitrogen Dioxide (NO ₂), µg/m ³ | PM ₁₀ , (µg/m ³) | PM _{2.5} , (µg/m ³) | Ammonia (NH ₃), µg/m ³ | Benzene (C ₆ H ₆), µg/m ³ |
| 08.11.2024 | N/24/11/3-0141 | 9 | 13 | 56 | 30 | <20 | <1 |
| 09.11.2024 | N/24/11/3-0217 | 5 | 10 | 51 | 28 | <20 | <1 |
| 15.11.2024 | N/24/11/4-0149 | 6 | 9 | 46 | 24 | <20 | <1 |
| 16.11.2024 | N/24/11/4-0213 | 11 | 12 | 30 | 19 | <20 | <1 |
| 18.11.2024 | N/24/11/5-0028 | 9 | 14 | 53 | 28 | <20 | <1 |
| 19.11.2024 | N/24/11/5-0068 | 11 | 18 | 57 | 35 | <20 | <1 |
| 25.11.2024 | N/24/11/5-0021 | 10 | 12 | 46 | 25 | <20 | <1 |
| 26.11.2024 | N/24/11/5-0086 | 9 | 14 | 52 | 29 | <20 | <1 |
| Limits for Industrial , Residential, Rural and other Areas | | 80 24 Hrs | 80 24 Hrs | 100 24 Hrs | 60 24 Hrs | 400 24 Hrs | 5 Annual |

| Date of Sampling | Lab Code | Lead (Pb), µg/m ³ | Nickel (Ni), ng/m ³ | Arsenic (As), ng/m ³ | Benzo(a) Pyrene (BaP), ng/m ³ | Carbon Monoxide* (CO), mg/m ³ | Ozone* (O ₃), µg/m ³ |
|--|----------------|------------------------------|--------------------------------|---------------------------------|--|--|---|
| 08.11.2024 | N/24/11/3-0141 | 0.22 | <0.1 | <0.5 | <0.5 | 0.35 | 25 |
| 09.11.2024 | N/24/11/3-0217 | 0.28 | <0.1 | <0.5 | <0.5 | 0.42 | 29 |
| 15.11.2024 | N/24/11/4-0149 | 0.22 | <0.1 | <0.5 | <0.5 | 0.29 | 24 |
| 16.11.2024 | N/24/11/4-0213 | 0.23 | <0.1 | <0.5 | <0.5 | 0.32 | 21 |
| 18.11.2024 | N/24/11/5-0028 | 0.29 | <0.1 | <0.5 | <0.5 | 0.32 | 26 |
| 19.11.2024 | N/24/11/5-0068 | 0.21 | <0.1 | <0.5 | <0.5 | 0.44 | 24 |
| 25.11.2024 | N/24/11/5-0021 | 0.15 | <0.1 | <0.5 | <0.5 | 0.29 | 23 |
| 26.11.2024 | N/24/11/5-0086 | 0.17 | <0.1 | <0.5 | <0.5 | 0.29 | 20 |
| Limits for Industrial , Residential, Rural and other Areas | | 1.0 24 Hrs | 20 Annual | 6 Annual | 1 Annual | 4 1 Hr | 180 1 Hr |

Note : * Parameters monitored for period of 1 hr

Arshiya Kousar

ARSHIYA KOUSAR
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TEST REPORT

AMBIENT AIR QUALITY

Table No. 2

Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant),
Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist ,

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A2, Existing Water Reservoir (Near WTP Plant)

Instrument Used : Envirotech APM 460BL Serial No. 2913-DTJ-2020
Envirotech APM -550, Serial No. 89 DTJ2012

Calibration due date of instrument : 24.03.2025

Duration : 24 Hrs

Issue date : 02.12.2024

Reference IS 5182 & Lab SOP

| Date of Sampling | Lab Code | Sulphur Dioxide (SO ₂), µg/m ³ | Nitrogen Dioxide (NO ₂), µg/m ³ | PM ₁₀ , (µg/m ³) | PM _{2.5} , (µg/m ³) | Ammonia (NH ₃), µg/m ³ | Benzene (C ₆ H ₆), µg/m ³ |
|--|----------------|---|--|---|--|---|---|
| 08.11.2024 | N/24/11/3-0142 | 7 | 9 | 55 | 30 | <20 | <1 |
| 09.11.2024 | N/24/11/3-0218 | 10 | 14 | 41 | 23 | <20 | <1 |
| 15.11.2024 | N/24/11/4-0150 | 8 | 13 | 48 | 26 | <20 | <1 |
| 16.11.2024 | N/24/11/4-0214 | 8 | 10 | 50 | 27 | <20 | <1 |
| 18.11.2024 | N/24/11/5-0029 | 9 | 11 | 45 | 25 | <20 | <1 |
| 19.11.2024 | N/24/11/5-0069 | 8 | 10 | 47 | 24 | <20 | <1 |
| 25.11.2024 | N/24/11/5-0022 | 11 | 16 | 49 | 26 | <20 | <1 |
| 26.11.2024 | N/24/11/5-0087 | 8 | 10 | 41 | 23 | <20 | <1 |
| Limits for Industrial , Residential, Rural and other Areas | | 80 24 Hrs | 80 24 Hrs | 100 24 Hrs | 60 24 Hrs | 400 24 Hrs | 5 Annual |

| Date of Sampling | Lab Code | Lead (Pb), µg/m ³ | Nickel (Ni), ng/m ³ | Arsenic (As), ng/m ³ | Benzo(a) Pyrene (BaP), ng/m ³ | Carbon Monoxide* (CO), mg/m ³ | Ozone* (O ₃), µg/m ³ |
|--|----------------|------------------------------|--------------------------------|---------------------------------|--|--|---|
| 08.11.2024 | N/24/11/3-0142 | 0.19 | <0.1 | <0.5 | <0.5 | 0.36 | 21 |
| 09.11.2024 | N/24/11/3-0218 | 0.22 | <0.1 | <0.5 | <0.5 | 0.27 | 25 |
| 15.11.2024 | N/24/11/4-0150 | 0.25 | <0.1 | <0.5 | <0.5 | 0.32 | 26 |
| 16.11.2024 | N/24/11/4-0214 | 0.21 | <0.1 | <0.5 | <0.5 | 0.25 | 25 |
| 18.11.2024 | N/24/11/5-0029 | 0.11 | <0.1 | <0.5 | <0.5 | 0.33 | 29 |
| 19.11.2024 | N/24/11/5-0069 | 0.17 | <0.1 | <0.5 | <0.5 | 0.27 | 24 |
| 25.11.2024 | N/24/11/5-0022 | 0.14 | <0.1 | <0.5 | <0.5 | 0.31 | 21 |
| 26.11.2024 | N/24/11/5-0087 | 0.18 | <0.1 | <0.5 | <0.5 | 0.27 | 26 |
| Limits for Industrial , Residential, Rural and other Areas | | 1.0 24 Hrs | 20 Annual | 6 Annual | 1 Annual | 4 1 Hr | 180 1 Hr |

Note : * Parameters monitored for period of 1 hr

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Dy. T.M. - Chemical

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TEST REPORT

AMBIENT AIR QUALITY

Table No. 3

Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant),
Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist ,

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A3, Galemmanagudi

Instrument Used : Envirotech APM 460BL Serial No. 2905-DTJ-2020
Envirotech APM -550, Serial No.86 DTJ2012

Calibration due date of instrument : 24.03.2025

Duration : 24 Hrs

Issue date : 02.12.2024

Reference IS 5182 & Lab SOP

| Date of Sampling | Lab Code | Sulphur Dioxide (SO ₂), µg/m ³ | Nitrogen Dioxide (NO ₂), µg/m ³ | PM ₁₀ , (µg/m ³) | PM _{2.5} , (µg/m ³) | Ammonia (NH ₃), µg/m ³ | Benzene (C ₆ H ₆), µg/m ³ |
|---|----------------|---|--|---|--|---|---|
| 08.11.2024 | N/24/11/3-0143 | 11 | 19 | 45 | 28 | <20 | <1 |
| 09.11.2024 | N/24/11/3-0219 | 9 | 11 | 50 | 27 | <20 | <1 |
| 15.11.2024 | N/24/11/4-0151 | 8 | 15 | 47 | 26 | <20 | <1 |
| 16.11.2024 | N/24/11/4-0215 | 10 | 13 | 50 | 27 | <20 | <1 |
| 18.11.2024 | N/24/11/5-0030 | 11 | 12 | 35 | 19 | <20 | <1 |
| 19.11.2024 | N/24/11/5-0070 | 12 | 15 | 44 | 25 | <20 | <1 |
| 25.11.2024 | N/24/11/5-0023 | 7 | 12 | 47 | 28 | <20 | <1 |
| 26.11.2024 | N/24/11/5-0088 | 10 | 13 | 50 | 29 | <20 | <1 |
| Limits for Industrial , Residential, Rural and other Areas | | 80 24 Hrs | 80 24 Hrs | 100 24 Hrs | 60 24 Hrs | 400 24 Hrs | 5 Annual |

| Date of Sampling | Lab Code | Lead (Pb), µg/m ³ | Nickel (Ni), ng/m ³ | Arsenic (As), ng/m ³ | Benzo(a) Pyrene (BaP), ng/m ³ | Carbon Monoxide* (CO), mg/m ³ | Ozone* (O ₃), µg/m ³ |
|---|----------------|------------------------------|--------------------------------|---------------------------------|--|--|---|
| 08.11.2024 | N/24/11/3-0143 | 0.16 | <0.1 | <0.5 | <0.5 | 0.22 | 22 |
| 09.11.2024 | N/24/11/3-0219 | 0.12 | <0.1 | <0.5 | <0.5 | 0.36 | 21 |
| 15.11.2024 | N/24/11/4-0151 | 0.10 | <0.1 | <0.5 | <0.5 | 0.42 | 21 |
| 16.11.2024 | N/24/11/4-0215 | 0.11 | <0.1 | <0.5 | <0.5 | 0.36 | 24 |
| 18.11.2024 | N/24/11/5-0030 | 0.17 | <0.1 | <0.5 | <0.5 | 0.22 | 25 |
| 19.11.2024 | N/24/11/5-0070 | 0.22 | <0.1 | <0.5 | <0.5 | 0.24 | 23 |
| 25.11.2024 | N/24/11/5-0023 | 0.17 | <0.1 | <0.5 | <0.5 | 0.28 | 25 |
| 26.11.2024 | N/24/11/5-0088 | 0.21 | <0.1 | <0.5 | <0.5 | 0.32 | 27 |
| Limits for Industrial , Residential, Rural and other Areas | | 1.0 24 Hrs | 20 Annual | 6 Annual | 1 Annual | 4 1 Hr | 180 1 Hr |

Note : * Parameters monitored for period of 1 hr

Arushi Kojisar
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TEST REPORT

AMBIENT AIR QUALITY

Table No. 4

| Name and Address of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasnakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist , | | | | | | | |
|---|----------------|---|--|---|--|---|---|
| Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services) | | | | | | | |
| Station at & Code : A4, Near Plant Railway Siding | | | | | | | |
| Instrument Used : Envirotech APM 460BL Serial No. 2216-DTI-2017 Envirotech APM -550, Serial No. 87 DTJ2012 | | | | | | | |
| Calibration due date of instrument : 24.03.2025 | | | | | | | |
| Duration : 24 Hrs | | | | | | | |
| Issue date : 02.12.2024 | | | | | | | |
| Reference IS 5182 & Lab SOP | | | | | | | |
| Date of Sampling | Lab Code | Sulphur Dioxide (SO ₂), µg/m ³ | Nitrogen Dioxide (NO ₂), µg/m ³ | PM ₁₀ , (µg/m ³) | PM _{2.5} , (µg/m ³) | Ammonia (NH ₃), µg/m ³ | Benzene (C ₆ H ₆), µg/m ³ |
| 08.11.2024 | N/24/11/3-0144 | 9 | 11 | 58 | 32 | <20 | <1 |
| 09.11.2024 | N/24/11/3-0220 | 7 | 9 | 54 | 29 | <20 | <1 |
| 15.11.2024 | N/24/11/4-0152 | 9 | 10 | 41 | 27 | <20 | <1 |
| 16.11.2024 | N/24/11/4-0216 | 8 | 11 | 58 | 32 | <20 | <1 |
| 18.11.2024 | N/24/11/5-0031 | 10 | 12 | 53 | 26 | <20 | <1 |
| 19.11.2024 | N/24/11/5-0071 | 7 | 10 | 46 | 23 | <20 | <1 |
| 25.11.2024 | N/24/11/5-0024 | 9 | 11 | 37 | 21 | <20 | <1 |
| 26.11.2024 | N/24/11/5-0089 | 8 | 13 | 50 | 27 | <20 | <1 |
| Limits for Industrial , Residential, Rural and other Areas | | 80 24 Hrs | 80 24 Hrs | 100 24 Hrs | 60 24 Hrs | 400 24 Hrs | 5 Annual |

| Date of Sampling | Lab Code | Lead (Pb), µg/m ³ | Nickel (Ni), ng/m ³ | Arsenic (As), ng/m ³ | Benzo(a) Pyrene (BaP), ng/m ³ | Carbon Monoxide* (CO), mg/m ³ | Ozone* (O ₃), µg/m ³ |
|--|----------------|------------------------------|--------------------------------|---------------------------------|--|--|---|
| 08.11.2024 | N/24/11/3-0144 | 0.19 | <0.1 | <0.5 | <0.5 | 0.35 | 25 |
| 09.11.2024 | N/24/11/3-0220 | 0.11 | <0.1 | <0.5 | <0.5 | 0.46 | 28 |
| 15.11.2024 | N/24/11/4-0152 | 0.23 | <0.1 | <0.5 | <0.5 | 0.41 | 28 |
| 16.11.2024 | N/24/11/4-0216 | 0.10 | <0.1 | <0.5 | <0.5 | 0.22 | 20 |
| 18.11.2024 | N/24/11/5-0031 | 0.19 | <0.1 | <0.5 | <0.5 | 0.39 | 21 |
| 19.11.2024 | N/24/11/5-0071 | 0.22 | <0.1 | <0.5 | <0.5 | 0.21 | 22 |
| 25.11.2024 | N/24/11/5-0024 | 0.15 | <0.1 | <0.5 | <0.5 | 0.36 | 26 |
| 26.11.2024 | N/24/11/5-0089 | 0.17 | <0.1 | <0.5 | <0.5 | 0.44 | 28 |
| Limits for Industrial , Residential, Rural and other Areas | | 1.0 24 Hrs | 20 Annual | 6 Annual | 1 Annual | 4 1 Hr | 180 1 Hr |
| Note : * Parameters monitored for period of 1 hr | | | | | | | |


 ARSHIYA KOUSAR
 Dy. T.M. - Chemical
 Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No. 5

Stack Monitoring Report

Report No. N028124113

| | |
|--|---|
| Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasnakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist , | |
| Location | : ARC Furnace area |
| Stack ID | : Stack Attached to Furnace - 3 |
| Sample Collected by | : Environmental Laboratory (Unit of Mineral Engineering Services) |
| Particulars of Sample Collected | : Emissions from stack collected through stack sample VSS1 |
| Date of Collection | : 11.11.2024 |
| Date of Sample Receipt | : 12.11.2024 |
| Lab Code | : N/24/11/3-0281 |
| Issue date | : 25.11.2024 |

STACK DETAILS

| | | |
|----|---|--|
| 1 | Fuel Used | - |
| 2 | Ambient Temperature ($^{\circ}\text{C}$) | 28 |
| 3 | Stack Temperature ($^{\circ}\text{C}$) | 110 |
| 4 | Velocity (m/s) | 5.59 |
| 5 | Stack Height (M) | 35 |
| 6 | Stack Diameter (M) | 2.5 |
| 7 | Cross Sectional Area in meter square (m^2) | 65381 |
| 8 | Quantity of flue Gas Discharged into atmosphere (Nm^3/hr) | 69834 |
| 9 | Sample Condition When Received | Satisfactory |
| 10 | Model of the Equipment used for Monitoring | Vayubodhan Stack Sampler VSS1 |
| 11 | Serial No. of the Equipment | 338 DTH 14 |
| 12 | Calibration done on and due on | Done on 19.11.2022 and Due on 18.11.2024 |

Pollutional Parameters (Result)

| Sl.No | Parameters | Unit | Results | Tolerance Limits Ref - G.S.R. 227(E) dated 31.03.2012 | Test Method |
|-------|------------------------------------|-------------------------|---------|---|---------------------------|
| 1 | Particulate Matter | mg/Nm^3 | 38.12 | 150 | IS: 11255(Part-1) 2014 |
| 2 | Sulphur Dioxide (SO_2), | mg/Nm^3 | 15.40 | -- | IS: 11255(Part-2) 2014 |
| 3 | Nitrogen Dioxide (NO_2) | mg/Nm^3 | 21.22 | -- | IS: 11255(Part-7) 2017 |
| 4 | CO | % | 0.33 | -- | flue gas analyser |
| 5 | Oxygen (O_2) | % | 15.21 | -- | flue gas analyser |

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TEST REPORT

Table No. 6

Stack Monitoring Report

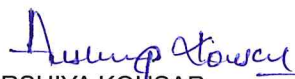
| | |
|---|------------------------------|
| Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist , | |
| Location | : Coke Oven Plant |
| Stack ID | : Stack Attached to WHRB -01 |
| Remarks - Shutdown | |

| | |
|---|------------------------------|
| Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist , | |
| Location | : Coke Oven Plant |
| Stack ID | : Stack Attached to WHRB -02 |
| Remarks - Shutdown | |

| | |
|---|-----------------------------------|
| Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist , | |
| Location | : Coke Oven Plant |
| Stack ID | : Stack Attached to Coal Crushing |
| Remarks - Shutdown | |

| | |
|---|---------------------------------|
| Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist , | |
| Location | : Coke Oven Plant |
| Stack ID | : Stack Attached to Coke Cutter |
| Remarks - Shutdown | |

| | |
|---|--|
| Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist , | |
| Location | : Coke Oven Plant |
| Stack ID | : Stack Attached to Coke Screening & Store |
| Remarks - Shutdown | |


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TEST REPORT

Table No. 7

AMBIENT NOISE LEVEL DATA

Report No. ELMES152411

Name and Address of the Industry : Ms. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant),
Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist ,

Particulars of Sample Collected : Ambient Noise Level collected through Sound Level Meter (HTC SL-1352 Data Logger)

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)


Date of sample collection : 08.11.2024

Date of sample receipt : 09.11.2024

Issue Date : 02.12.2024

Sampling & Test Method : IS:9989

| Code No. | Monitoring stations | Day | | | Night | | |
|---|--|------------------------|-----------------|------------------|------------------------|-----------------|------------------|
| | | (06.00 Am to 10.00 Pm) | | | (10.00 Pm to 06.00 Am) | | |
| | | L _{min} | L _{eq} | L _{max} | L _{min} | L _{eq} | L _{max} |
| Core zone | | | | | | | |
| N1 | Near Existing AAQMS 01 (SMIORE Schools) | 40.0 | 65.3 | 75.2 | 34.0 | 45.5 | 51.2 |
| N2 | Existing Water Reservoir (Near WTP Plant) | 37.5 | 54.0 | 63.0 | 34.0 | 48.2 | 55.0 |
| Buffer zone | | | | | | | |
| N3 | Galemmanagudi | 39.0 | 49.9 | 57.3 | 34.2 | 43.6 | 47.0 |
| N4 | Vysanakere Village | 36.0 | 50.3 | 56.3 | 34.0 | 44.5 | 46.0 |
| N5 | Hanumanhalli | 38.0 | 52.9 | 58.0 | 33.5 | 41.2 | 46.0 |
| <u>Permissible Limits of Ambient Noise Levels as per CPCB Guidelines</u> | | | | | | | |
| Leq. Limit dB(A) | | | | | | | |
| | | Day | | Night | | | |
| Industrial areas | | 75 | | 70 | | | |
| Commercial area | | 65 | | 55 | | | |
| Residential area | | 55 | | 45 | | | |


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TEST REPORT

Table No. 8

Report No : ED007424113

| | |
|---------------------------------|---|
| Name of the Client | : M/s. M/s. Sandur Manganese & Iron Ores Limited (Metal & Ferro Alloys Plant), |
| Name of the Project | : Vyasanakere, Hanumanahalli Village, Hospet Taluk, Ballari Dist, |
| Particulars of sample collected | : DW1 - Plant Drinking water |
| Sample Collected by | : Environmental Laboratory (Unit of Mineral Engineering Services) |
| Date of sample collection | : 09.11.2024 |
| Date of sample receipt | : 11.11.2024 |
| Lab Code | : ED/24/11/3-0074 |
| Issue Date | : 18.11.2024 |
| Ref | : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards) |

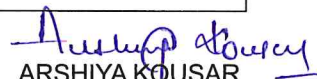
| Sl. No. | Parameters | Results | Desirable Limits | Permissible Limits | Method of Testing |
|---------|---|--------------|---|--------------------|---------------------------------|
| 1 | Colour (Hazen Units), Max | <1 | 5 | 15 | IS:3025 (P-4)02021 |
| 2 | Odour, Max | Agreeable | Agreeable | Agreeable | IS:3025 (P-5) 2018 |
| 3 | pH Value | 7.41 | 6.5 to 8.5 | 6.5 - 8.5 | IS:3025 (P-11)2022 |
| 4 | Taste | Agreeable | Agreeable | Agreeable | IS:3025 (P- 8)1984 RA 2017 |
| 5 | Turbidity,NTU, Max | <0.1 | 1 | 5 | IS:3025 (P-10)1984 RA2017 |
| 6 | Electrical Conductivity (μ mhos/cm) | 60 | -- | -- | IS 3025 (P-14) |
| 7 | Total Dissolved Solids,mg/l, Max | 45 | 500 | 2000 | IS:3025 (P-16)1984 RA2017 |
| 8 | Aluminium (as Al), Max | <0.005 | 0.03 | 0.2 | IS:3025 (P-55)2003 RA2019 |
| 9 | Ammonia (as total Ammonia -N),mg/l, Max | <0.1 | 0.5 | 0.5 | IS:3025 (P-34)1988 RA2019 |
| 10 | Anionic Detergents (as MBAS),mg/l, Max | <0.1 | 0.2 | 1.0 | Annex K of Is:13428Amm 11 2022 |
| 11 | Barium (as Ba), mg/l, Max | <0.005 | 0.7 | 0.7 | IS:3025(P-2)2019 |
| 12 | Boron (as B), mg/l, Max | <0.1 | 0.5 | 2.4 | IS:3025 (Part-57)2021 |
| 13 | Calcium (as Ca),mg/l, Max | 3.20 | 75 | 200 | IS:3025 (P-40)1991 RA 2019 |
| 14 | Copper (as Cu),mg/l, Max | <0.005 | 0.05 | 1.5 | IS:3025 (P-2)2019 |
| 15 | Chloride as Cl (mg/l),mg/l, Max | 6.35 | 250 | 1000 | IS:3025 (P-32)1988 RA 2019 |
| 16 | Fluoride (as F),mg/l, Max | <0.1 | 1 | 1.5 | IS:3025 (P-60)2008 RA 2019 |
| 17 | Residual, Free Chlorine,mg/l, Max | <0.1 | 0.2 | 1 | IS:3025 (P-26)2021 |
| 18 | Chloramines as C12, Max | <0.1 | 4 | 4 | IS:3025(P-26)2021 |
| 19 | Iron (as Fe),mg/l, Max | 0.02 | 1.0 | 1.0 | IS:3025 (Part-2)2019 |
| 20 | Magnesium (as Mg)mg/l, Max | 1.5 | 30 | 100 | IS:3025 (P-46)1994 RA 2019 |
| 21 | Manganese (as Mn),mg/l, Max | <0.001 | 0.1 | 0.3 | IS:3025 (P-2)2019 |
| 22 | Mineral Oil,mg/l, Max | <0.5 | 1.0 | 1.0 | Clause 6 of IS 3025 (P-39) 2021 |
| 23 | Nitrates (as NO ₃),mg/l, Max | 0.40 | 45 | 45 | IS:3025 (P-34) 1988 RA 2019 |
| 24 | Phenolics (as C ₆ H ₅ OH),mg/l, Max | <0.001 | 0.001 | 0.002 | IS:3025 (P-43)Sec 1 2022 |
| 25 | Selenium (as Se),mg/l, Max | <0.005 | 0.01 | 0.01 | IS:3025(P-2)2019 |
| 26 | Silver (as Ag), mg/l, Max | <0.005 | 0.1 | 0.1 | IS:3025(P-2)2019 |
| 27 | Molybdenum (as Mo), mg/l, Max | <0.001 | 0.07 | 0.07 | IS:3025 (P-2)2019 |
| 28 | Sulphates (as SO ₄),mg/l, Max | 2.02 | 200 | 400 | IS:3025 (P-24) Sec 1 2022 |
| 29 | Sulphide (as H ₂ S) , mg/l, Max | <0.01 | 0.05 | 0.05 | IS:3025 (P-29):1986 RA 2019 |
| 30 | Alkalinity (as CaCO ₃) mg/l, Max | 10.4 | 200 | 600 | IS:3025 (P-23):1986 RA 2019 |
| 31 | Total Hardness (as CaCO ₃),mg/l, Max | 14.0 | 200 | 600 | IS:3025 (P-21):2009 RA 2019 |
| 32 | Zinc (as Zn),mg/l, Max | <0.005 | 5 | 15 | IS:3025 (P-2) 2019 |
| 33 | Cadmium (as Cd),mg/l, Max | <0.001 | 0.003 | 0.003 | IS:3025 (P-2)2019 |
| 34 | Cyanide (as CN),mg/l, Max | <0.01 | 0.05 | 0.05 | IS:3025 (P-27)Sec 1 2021 |
| 35 | Lead (as Pb),mg/l, Max | <0.005 | 0.01 | 0.01 | IS:3025 (P-2)2019 |
| 36 | Mercury (as Hg),mg/l, Max | <0.0005 | 0.001 | 0.001 | USPEA 200.7 Rev 4.4 |
| 37 | Nickel (as Ni),mg/l, Max | <0.001 | 0.02 | 0.02 | IS:3025 (P-2) 2019 |
| 38 | Arsenic (as As),mg/l, Max | <0.002 | 0.01 | 0.01 | IS:3025 (P-2)2019 |
| 39 | Total Chromium (as Cr),mg/l, Max | <0.001 | 0.05 | 0.05 | IS:3025 (P-52)2014 |
| 40 | Escherichia coli/100ml | Not Detected | Shell Not be detected in any 100ml sample | | IS:15185:2016 RA 2021 |
| 41 | Total Coliform (cfu/100ml) | Not Detected | Shell Not be detected in any 100ml sample | | IS:15185:2016 RA 2021 |

"END OF REPORT"


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TEST REPORT

Report No : ED007324113

| | |
|---------------------------------|--|
| Name of the Client | : M/s. Sandur Manganese & Iron Ores Limited |
| Name of the Project | : Iron & Steel Plant at Vyasnakere village, Hosapete Taluk, Ballari District, Karnataka |
| Particulars of sample collected | : 50 KLD STP Out Let Water |
| Date of sample collection | : 09.11.2024 |
| Lab Code | : ED/24/11/3-0073 |
| Issue Date | : 19.11.2024 |

Ref : Discharge Standards for Treated Sewage Utilized for Landscape/Irrigation/Secondary Purposes

| Sl. No. | Parameters | units | Results | Tolerance Limit | Method of Testing |
|---------|--|-----------|---------|-----------------|------------------------------|
| 1 | pH | - | 7.71 | 6.5 - 9.0 | IS 3025 (P-11)2017 |
| 2 | Biochemical Oxygen Demand BOD ₃ 27 ^o C | mg/l | 8 | <10 | IS 3025 (P-44) 1993 RA 2019 |
| 3 | Chemical Oxygen Demand (COD) | mg/l | 42 | <50 | IS 3025 (P-58) 2006 RA 2017 |
| 4 | Total Suspended Solids, at 105 ^o C | mg/l | 12 | <20 | IS 3025 (P-16)1984 RA 2017 |
| 5 | Ammonium (NH ₄ -N) | mg/l | 0.4 | <5 | IS:3025 (P-34) 2023 |
| 6 | Total Nitrogen (N) | mg/l | 6 | <10 | IS 3025 (Part-34) |
| 7 | Fecal coliform | MPN/100ml | <1.8 | <100 | APHA24 th Edition |

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