

Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor) Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 08392-255169,

E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018951F

Report Issued Date: 07.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

3. Sample Collected By MSV Analytical Laboratories, Bellary.

4. Particulars of the sample Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt 5. 6.

03.10.2022

Analysis Starting Date 7. Analysis Completion Date 04.10.2022 07.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Shi | ift wise res | sults | Units | Result | |
|------|---|----------------------------|-------|--------------|-------|---------|---------|--------|
| | | - Y | 1 | 2 | 3 | | in Avg. | limits |
| 1 | Particulate Matter PM ₁₀ μg/m ³ | IS-5182(Part-23) – 2006 | 68.4 | 61.4 | 60.2 | μg / m³ | 63.3 | 100 |
| 2 | Particulate Matter or PM _{2.5} μg/m ³ | LAB SOP MSVAL/SOP/A/005 | 21.6 | 20.6 | 19.4 | μg / m³ | 20.5 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 14.2 | 16.2 | 11.9 | μg / m³ | 14.1 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) – 2006 | 16.1 | 18.2 | 14.5 | μg / m³ | 16.3 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 9.2 | 8.8 | 7.5 | μg / m³ | 8.5 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.025 | 0.027 | 0.018 | μg / m³ | 0.02 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.30 | 0.34 | 0.26 | mg/m³ | 0.3 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.20 | 1.24 | 1.16 | ng/m³ | 1.2 | 20 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor) Sanganakallu Road, KEB Circle, Bellary-583103. Contact No: Mob: 94498 03895, (0): 08392-255169,

E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9901

Report Issued Date: 07.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Smiore Colony

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM450 and FDS GTI-131

5. Date of Sample Receipt

: 03.10.2022

6. Analysis Starting Date

: 04.10.2022

7. Analysis Completion Date

: 07.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise re | esults | Units | Result in | Tolerance |
|------|--|----------------------------|-------|-------------|--------|---------|-----------|-----------|
| | | | 1 | 2 | 3 | | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

Report:

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

[.] The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of ssue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & annot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice imount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * ire not accredited by NABL.



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018954F

Report Issued Date: 07.10.2022

Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village MSV Analytical Laboratories, Bellary.

Sample Collected By Particulars of the sample Sample collected with RDS APM460 and FDS GTI-131

03.10.2022 **Date of Sample Receipt** 04.10.2022 **Analysis Starting Date** : 07.10.2022 **Analysis Completion Date**

| 4 | 8. Sample Tested as R | Protocols | Shift | wise resu | lts | Units | Result in Avg. | Tolerance limits |
|--------|---|----------------------------|-------|-----------|-------|---------------------|-------------------|---------------------|
| S.No | Parameter | Protocois | 1 | 2 | 3 | | | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 46.8 | 45.4 | 44.2 | μg / m³ | 45.5 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 18.5 | 17.2 | 16.4 | μg / m ³ | 17.4 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 11.7 | 10.8 | 9.8 | μg / m³ | 10.8 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) – 2006 | 13.3 | 12.3 | 11.7 | μg / m³ | 12.4 | 80 |
| | Ozone as O ₃ | IS 5182(part-9)1974 | 8.7 | 8.2 | 7.6 | μg / m³ | 8.2 | 100 |
| 5 6 | Lead | IS-5182(Part22) - 2004 | 0.25 | 0.28 | 0.20 | μg / m³ | 0.2 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.40 | 0.52 | 0.32 | mg/m³ | 0.4 | 2 |
| 8 | CO Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 13.3 | 12.3 | 11.7 | ng/m³ | 12.4 | 20 |

INFERENCE

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9904

Report Issued Date: 07.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

Kallahalli Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

03.10.2022 04.10.2022

7. Analysis Completion Date

: 07.10.2022

. Sample Tested as Received

| | Parameter | Protocols | Shi | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|-------|-------------|-------|---------|----------------|---------------------|
| S.No | Parameter | Tiotocois | 1 | 2 | 3 | | Avg. | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | (BaP) Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

| INFERENCE | As per NAAQS Standards Report Status: - The analyzed values for above measured parameter are within the limits |
|-----------|--|

Vorified by

Authorized Signature

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018953F

Report Issued Date: 07.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Vysanakere Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

03.10.2022

Date of Sample Receipt **Analysis Starting Date**

04.10.2022

07.10.2022

| | 8. Sample Tested as R | | Shift wise results | | | Units | Result in Avg. | Toleranc e limits |
|------|--|----------------------------|--------------------|--------|-------|---------------------|-------------------|----------------------|
| S.No | Parameter | Protocols | 1 | 2 | 3 | | | |
| 1 | Particulate Matter | IS-5182(Part-23) - 2006 | 58.4 | 57.4 | 56.4 | μg / m³ | 57.4 | 100 |
| 2 | PM ₁₀ μg/m ³ Particulate Matter or | LAB SOP MSVAL/SOP/A/005 | 18.7 | 17.6 | 16.7 | μg / m ³ | 17.7 | 60 |
| 3 | PM _{2.5} μg/m ³ Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 12.9 | 11.9 | 10.9 | $\mu g / m^3$ | 11.9 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 19.2 | 17.5 | 16.7 | μg / m³ | 17.8 | 80 |
| | NOx | IS 5182(part-9)1974 | 8,5 | 8.2 | 6.8 | $\mu g / m^3$ | 7.8 | 100 |
| 5_ | Ozone as O ₃ | IS-5182(Part22) - 2004 | 0.017 | 0.019 | 0.015 | μg / m³ | 0.01 | 1 |
| 6 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.20 | 0.21 | 0.16 | mg/m³ | 0.2 | 2 |
| 7 | CO Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.0.1 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.20 | 1.28 | 1.18 | ng/m³ | 1.2 | 20 |

INFERENCE

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will Note: 1. The results listed only to the tested samples & applicable parameters,

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9903

Report Issued Date: 07.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

Vysanakere Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

03.10.2022

7. Analysis Starting Date
7. Analysis Completion Date

: 04.10.2022 : 07.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise r | esults | Units | Result in | Tolerance |
|------|--|----------------------------|-------|------------|--------|---------|-----------|-----------|
| | | La IY | 1 | 2 | 3 | James | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | -5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

-: End of The Reports

[.] The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of sue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & annot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice mount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an *



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018952F

Report Issued Date: 07.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt
 Analysis Starting Date
 Analysis Completion Date

: 03.10.2022 : 04.10.2022 : 07.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise res | ults | Units | Result | Tolerance |
|-------|---|----------------------------|-------|--------------|-------|---------|---------|-----------|
| 3.140 | Tarameter | 11000013 | 1 | 2 | 3 | | in Avg. | limits |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 48.5 | 47.5 | 46.6 | μg / m³ | 47.5 | 100 |
| 2 | Particulate Matter or PM _{2.5} μg/m ³ | LAB SOP MSVAL/SOP/A/005 | 20.1 | 19.2 | 18.4 | μg / m³ | 19.2 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) – 2001 | 11.8 | 10.8 | 9.9 | μg / m³ | 10.8 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) – 2006 | 13.7 | 12.5 | 11.4 | μg / m³ | 12.5 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 8.3 | 7.6 | 7.5 | μg / m³ | 7.8 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.024 | 0.022 | 0.20 | μg / m³ | 0.1 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.24 | 0.28 | 0.20 | mg / m³ | 0.2 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP | 1.20 | 1.28 | 1.16 | ng/m³ | 1.2 | 20 |

INFERENCE

As per NAAQS Standards

MSVAL/SOP/A/008

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

Water samples will destroyed after 10 days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellarv.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9902

Report Issued Date: 07.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt

03.10.2022

Analysis Starting Date

04.10.2022

Analysis Completion Date

07.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise re | sults | Units | Result in | Tolerance |
|------|--|----------------------------|-------|-------------|-------|-----------------|-----------|-----------|
| | | a IV | 1 | 2 | 3 | \$410.703.8.E.s | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

As per NAAQS Standards INFERENCE

Report Status: The analyzed values for above measured parameter are within the limits

Verified by



^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of ssue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & :annot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice mount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * ire not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019095F

Report Issued Date: 11.10.2022

Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131 06.10.2022

Date of Sample Receipt Analysis Starting Date **Analysis Completion Date** 7.

07.10.2022 11.10.2022

| | 8. Sample Tested as R | > (Y) | Shift | wise resul | its | Units | Result in | Tolerance limits |
|------|---|----------------------------|-------|------------|-------|---------|--------------|---------------------|
| S.No | Parameter | Protocols | 1 | 2 | 3 | | Avg. | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 55.2 | 54.2 | 53.8 | μg / m³ | 54.4 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 20.1 | 19.4 | 18.2 | μg / m³ | 19.2 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 10.2 | 8.3 | 7.7 | μg / m³ | 8.7 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 14.5 | 12.1 | 10.8 | μg / m³ | 12.5 | 80 |
| - | NOx | | 9.2 | 9.5 | 8.8 | μg / m³ | 9.2 | 100 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | | | 2.024 | | 0.01 | 1 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.025 | 0.023 | 0.021 | μg / m³ | 1000000 | |
| | Carbon Monoxide as | LAB SOP | 0.37 | 0.34 | 0.32 | mg/m³ | 0.3 | 2 |
| 7 | CO | MSVAL/SOP/A/007 | | 0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μ6/ ΙΙΙ | | |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.27 | 1.26 | 1.24 | ng / m³ | 1.3 | 20 |

INFERENCE

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by



Authorized Signature

2. Water samples will destroyed after 10days, Filler papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will Note: 1. The results listed only to the tested samples & applicable parameters,

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writin

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9968

Report Issued Date: 11.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

06.10.2022 07.10.2022

Analysis Completion Date

11.10.2022

| | | Protocols | Shi | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|-------|-------------|-------|---------|----------------|---------------------|
| S.No | Parameter | Flotocois | 1 | 2 | 3 | | | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 1 |
| 12 | (BaP) Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

cel. 2 Authorized Signature



^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019098F

Report Issued Date: 11.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location Kallahalli Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt 5. **Analysis Starting Date Analysis Completion Date** 06.10.2022 07.10.2022 11.10.2022

Sample Tested as Received

| | Description 1 | Protocols | Shif | t wise res | ults | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|-------|------------|-------|---------------|-------------------|---------------------|
| S.No | Parameter | Trotocois | 1 | 2 | 3 | | III Avg. | mmes |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 51.4 | 50.2 | 49.4 | μg / m³ | 50.3 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 16.5 | 15.2 | 14.2 | μg / m³ | 15.3 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 10.4 | 8.6 | 7.9 | μg / m³ | 9.0 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) - 2006 | 15.2 | 13.6 | 13.1 | μg / m³ | 14.0 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 8.7 | 7.4 | 6.2 | $\mu g / m^3$ | 7.4 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.025 | 0.026 | 0.028 | μg / m³ | 0.02 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.47 | 0.43 | 0.40 | mg/m³ | 0.4 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.20 | 1.21 | 1.22 | ng / m³ | 1.2 | 20 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9971

Report Issued Date: 11.10.2022

Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant) Vyasanakere, Hanumanahalli Village,

Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131 06.10.2022

Date of Sample Receipt Analysis Starting Date

07.10.2022 11.10.2022

Analysis Completion Date Sample Tested as Received

| | Parameter | Protocols | Sh | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|-------|-------------|-------|---------|-------------------|---------------------|
| S.No | | Protocols | 1 | 2 | 3 | | | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 1 |
| 12 | (BaP) Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits INFERENCE

Verified by

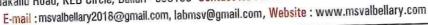
Authorized/Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019096F

Report Issued Date: 11.10.2022

Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Vysanakere Village

MSV Analytical Laboratories, Bellary.

Sample Collected By 3. Particulars of the sample

06.10.2022

Date of Sample Receipt 5. **Analysis Starting Date** 6.

07.10.2022

Analysis Completion Date

11.10.2022

Sample Tested as Received

| | 8. Sample Tested as R | 57 (7 | Shift | wise resu | lts | Units | Result | Tolerance limits |
|------|---|----------------------------|-------|-----------|-------|---------------------|---------|---------------------|
| S.No | Parameter | Protocols | 1 | 2 | 3 | | in Avg. | IIIII |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 53.4 | 52.6 | 51.6 | μg / m³ | 52.5 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 20.6 | 19.2 | 18.4 | μg / m³ | 19.4 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 11.2 | 9.5 | 9.1 | μg / m³ | 9.9 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 14.9 | 11.9 | 11.5 | μg / m³ | 12.8 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 8.9 | 8.6 | 8.3 | μg / m³ | 8.6 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.018 | 0.018 | 0.018 | μg / m³ | 0.01 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.19 | 0.17 | 0.19 | mg/m³ | 0.2 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.0.1 | <0.01 | μg / m ³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.28 | 1.29 | 1.25 | ng/m³ | 1.3 | 20 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9969

Report Issued Date: 11.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Vysanakere Village

Sample Collected By Particulars of the sample MSV Analytical Laboratories, Bellary.

Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131 06.10.2022

Analysis Starting Date

07.10.2022

Analysis Completion Date

11.10.2022

| 8. | Sample Tested as Received |
|----|---------------------------|
| | |

| Week. | Parameter | Protocols | Shi | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|-------|--|----------------------------|-------|-------------|-------|---------|-------------------|---------------------|
| S.No | | Flotocois | 1 | 2 | 3 | | | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 1 |
| 12 | (BaP) Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

As per NAAQS Standards Report Status:- The analyzed values for above measured parameter are within the limits INFERENCE

Verified by

uthorized Signature

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part 8 cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019097F

Report Issued Date: 11.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date Analysis Completion Date**

06.10.2022 07.10.2022 11.10.2022

| | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|--------------------|-------|--------------|---------|-------------------|---------------------|
| S.No | | Trotocoio | 1 | 2 | 3 | | 100 (100 miles) | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 57.2 | 56.2 | 55.2 | μg / m³ | 56.2 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 16.2 | 15.6 | 14.2 | μg / m³ | 15.3 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 9.2 | 9.3 | 6.6 | μg / m³ | 8.4 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 11.2 | 9.4 | 8.2 | μg / m³ | 9.6 | 80 |
| | NOx | 10.51.03(nort 0)1074 | 8.5 | 8.3 | 8.1 | μg / m³ | 8.3 | 100 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 0.0 | 1 | 10.0 (10.00) | ,,,,,,, | 0.02 | 1 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.024 | 0.023 | 0.021 | μg / m³ | 0.02 | |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.25 | 0.22 | 0.24 | mg/m³ | 0.2 | 2 |
| 8 | CO Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.25 | 1.24 | 1.22 | ng / m³ | 1.2 | 20 |

INFERENCE

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be Note: 1. The results listed only to the tested samples & applicable parameters,

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9970

Report Issued Date: 11.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt 6. Analysis Starting Date

06.10.2022 07.10.2022 11.10.2022

7. Analysis Completion Date

| | Parameter | Protocols | Sh | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|-------|-------------|-------|---------|-------------------|---------------------|
| S.No | | Trotocols | 1 | 2 | 3 | | | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019214F

Report Issued Date: 13.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt Analysis Starting Date Analysis Completion Date

08.10.2022 10.10.2022 : 13.10.2022

Sample Tested as Received

| | | Protocols | Shift | wise resu | lts | Units | Result in Avg. | Tolerance limits |
|------|---|----------------------------|-------|-----------|-------|---------------------|-------------------|---------------------|
| S.No | Parameter | Trotocolo | 1 | 2 | 3 | | III Avg. | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 56.7 | 55.6 | 54.2 | μg / m³ | 55.5 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 30.4 | 29.2 | 28.4 | μg / m ³ | 29.3 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 9.9 | 9.1 | 7.9 | μg / m³ | 9.0 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 16.5 | 15.8 | 15.2 | μg / m³ | 15.8 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 9.4 | 9.3 | 9.2 | μg / m³ | 9.3 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.031 | 0.030 | 0.029 | μg / m³ | 0.01 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.43 | 0.42 | 0.41 | mg/m³ | 0.4 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m ³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.29 | 1.28 | 1.27 | ng/m³ | 1.3 | 20 |

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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Sanganakallu Road, KEB Circle, Bellary-583103. Contact No: Mob: 94498 03895, (0): 08392-255169,

E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10024

Report Issued Date: 13.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Smiore Colony

: MSV Analytical Laboratories, Bellary.

Sample Collected By
 Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt
6. Analysis Starting Date
7. Analysis Completion Date

: 08.10.2022 : 10.10.2022

8. Sample Tested as Received

13.10.2022

| S.No | Parameter | Protocols | Shift wise results | | | Units | Result in | Tolerance |
|-------|--|----------------------------|--------------------|-------|-------|--|-----------|-----------|
| 3.140 | | | 1 | 2 | 3 | THE STATE OF THE S | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019217F

Report Issued Date: 13.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample **Date of Sample Receipt**

Sample collected with RDS APM460 and FDS GTI-131 08.10.2022

Analysis Starting Date Analysis Completion Date

10.10.2022 13.10.2022

| | 8. Sample Tested as R | Protocols | Shift | wise resul | ts | Units | Result in Avg. | Tolerance limits |
|------|---|----------------------------|-------|------------|-------|---------------------|-------------------|---------------------|
| S.No | Parameter | Totocoio | 1/ | 2 | 3 | | | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 58.2 | 57.4 | 58.2 | μg / m³ | 57.9 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 20.3 | 19.2 | 18.4 | μg / m ³ | 19.3 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 11.1 | 9.2 | 9.5 | μg / m³ | 9.9 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 18.2 | 16.9 | 15.9 | μg / m³ | 17.0 | 80 |
| - | NO _x | IS 5182(part-9)1974 | 12.3 | 11.4 | 10.6 | $\mu g / m^3$ | 11.4 | 100 |
| 5 | Ozone as O ₃ | IS-5182(Part22) - 2004 | 0.026 | 0.025 | 0.024 | μg / m³ | 0.02 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.34 | 0.33 | 0.32 | mg/m³ | 0.3 | 2 |
| | CO Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.22 | 1.21 | 1.20 | ng / m³ | 1.2 | 20 |

INFERENCE

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be Note: 1. The results listed only to the tested samples & applicable parameters,

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10027

Report Issued Date: 13.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

08.10.2022 10.10.2022

Analysis Completion Date

: 13.10.2022

Sample Tested as Received

| 232 | Parameter | Protocols | Sh | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|-------|-------------|-------|---------|----------------|---------------------|
| S.No | | Trotocols | 1 | 2 | 3 | | | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

| INFERENCE | As per NAAQS Standards Report Status:- The analyzed values for above measured parameter are within the limits |
|-----------|---|
| | Report Status :- The analyzed values for doors and the |

Verified by

uthorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/16/03

Report Issued Date: 13.10.2022

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019216F

: M/s. The Sandur Manganese & Iron Ores Ltd.

Name of the Project (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location Vysanakere Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Date of Sample Receipt 08.10.2022 5. **Analysis Starting Date** 10.10.2022 **Analysis Completion Date** 13.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Shi | ift wise res | ults | Units | Result | Toleranc |
|------|---|----------------------------|-------|--------------|-------|---------|---------|----------|
| | | | 1 | 2 | 3 | | in Avg. | e limits |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) – 2006 | 51.2 | 50.3 | 49.4 | μg / m³ | 50.3 | 100 |
| 2 | Particulate Matter or PM _{2.5} μg/m ³ | LAB SOP MSVAL/SOP/A/005 | 38.6 | 37.5 | 36.4 | μg / m³ | 37.5 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 7.8 | 6.9 | 5.8 | μg / m³ | 6.8 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) – 2006 | 12.8 | 11.7 | 11.6 | μg / m³ | 12.0 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 7.6 | 7.5 | 7.2 | μg / m³ | 7.4 | 100 |
| 6 | Lead | IS-5182(Part22) – 2004 | 0.021 | 0.020 | 0.019 | μg / m³ | 0.02 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.25 | 0.24 | 0.23 | mg/m³ | 0.2 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.0.1 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.26 | 1.25 | 1.23 | ng/m³ | 1.2 | 20 |

As per NAAQS Standards INFERENCE

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

· Ul.2 Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10026

Report Issued Date: 13.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant) Vyasanakere, Hanumanahalli Village,

Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Vysanakere Village

. Sample Collected By

: MSV Analytical Laboratories, Bellary.

Particulars of the sample
 Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131 08.10.2022

6. Analysis Starting Date 7. Analysis Completion Date

: 10.10.2022 : 13.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise re | sults | Units | Result in | Tolerance |
|-------|--|----------------------------|-------|-------------|-------|---------|-----------|-----------|
| Bille | | | 1 | 2 | 3 | | Avg. | lillits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

INFERENCE As per NAAQS Standards
Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

Report Issued Date: 13.10.2022

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019215F

: M/s. The Sandur Manganese & Iron Ores Ltd.

1. Name of the Project (Metal & Ferro Alloys Plant)

> Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location **Gunda Village**

MSV Analytical Laboratories, Bellary.

Sample Collected By Particulars of the sample Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt 08.10.2022 **Analysis Starting Date** 10.10.2022 **Analysis Completion Date** 13.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise res | ults | Units | Result | Tolerance |
|------|---|----------------------------|-------|--------------|-------|---------|---------|-----------|
| | | | 1 | 2 | 3 | | in Avg. | limits |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 54.2 | 53.1 | 52.1 | μg / m³ | 53.1 | 100 |
| 2 | Particulate Matter or PM _{2.5} μg/m ³ | LAB SOP MSVAL/SOP/A/005 | 22.6 | 21.4 | 20.5 | μg / m³ | 21.5 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) – 2001 | 9.1 | 9.1 | 8.9 | μg / m³ | 9.0 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) – 2006 | 18.2 | 17.5 | 15.7 | μg / m³ | 17.1 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 8.6 | 8.5 | 8.2 | μg / m³ | 8.4 | 100 |
| 6 | Lead | IS-5182(Part22) – 2004 | 0.041 | 0.040 | 0.039 | μg / m³ | 0.04 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.26 | 0.25 | 0.24 | mg/m³ | 0.3 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.31 | 1.30 | 1.29 | ng/m³ | 1.3 | 20 |

As per NAAQS Standards INFERENCE

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10025

Report Issued Date: 13.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

: 08.10.2022 : 10.10.2022

7. Analysis Completion Date

: 13.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Sh | Shift wise results | | | Result in Avg. | Tolerance limits |
|-------|--|----------------------------|-------|--------------------|-------|---------|----------------|---------------------|
| 5.110 | T di dinicio: | , | 1 | 2 | 3 | | Avg. | lillics |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019374F

Report Issued Date: 15.10.2022

Name of the Project

3.

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Smiore Colony Name of the location

MSV Analytical Laboratories, Bellary. Sample collected with RDS APM460 and FDS GTI-131 Sample Collected By

Particulars of the sample 11.10.2022 Date of Sample Receipt 5. 12.10.2022 **Analysis Starting Date** 6. 15.10.2022

Analysis Completion Date 8. Sample Tested as Received

| | 8. Sample Tested as R | - (V) | Shift | wise resu | lts | Units | Result in Avg. | Tolerance limits |
|------|---|----------------------------|-------|------------|-------|---------------------|-------------------|---------------------|
| S.No | Parameter | Protocols | 1 | / 2 | 3 | | | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 60.2 | 59.4 | 57.5 | $\mu g / m^3$ | 59.0 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 30.3 | 28.3 | 26.4 | μg / m³ | 28.3 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 12.3 | 11.2 | 9.8 | μg / m³ | 11.1 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 17.9 | 16.6 | 14.9 | μg / m³ | 16.5 | 80 |
| | NOx | 72 5102(t 0)1074 | 9.5 | 9.2 | 9.1 | μg / m³ | 9.3 | 100 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 7.0 | | 2000 | | 0.02 | 1 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.032 | 0.035 | 0.036 | μg / m ³ | 0.03 | - |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.43 | 0.48 | 0.45 | mg/m³ | 0.5 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.30 | 1.35 | 1.39 | ng / m³ | 1.3 | 20 |

Report Status:- The analyzed values for above measured parameter are within the limits INFERENCE

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10097

Report Issued Date: 15.10.2022

Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

11.10.2022 12.10.2022

Analysis Completion Date

: : 15.10.2022

Sample Tested as Received

| on oan | | Protocols | Shi | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|--------|--|----------------------------|-------|-------------|-------|---------|----------------|---------------------|
| S.No | Parameter | Frotocois | 1 | 2 | 3 | | g. | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | (BaP) Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

-: End of The Report:

Authorized Signature

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019375F

Report Issued Date: 15.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location 2.

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt Analysis Starting Date Analysis Completion Date 7

11.10.2022 12.10.2022

Sample Tested as Received

15.10.2022

| | 8. Sample Tested as R | Protocols | Shift | wise resu | lts | Units | Result in Avg. | Tolerance limits |
|--------|---|----------------------------|-------|-----------|-------|---------------|-------------------|---------------------|
| S.No | Parameter | Protocois | 1 | 2 | 3 | | | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 55.2 | 53.2 | 51.7 | μg / m³ | 53.4 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 18.4 | 16.4 | 15.3 | μg / m³ | 16.7 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 12.2 | 10.8 | 9.9 | μg / m³ | 11.0 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 16.4 | 14.8 | 13.8 | μg / m³ | 15.0 | 80 |
| | Ozone as O ₃ | IS 5182(part-9)1974 | 8.2 | 8.6 | 8.9 | $\mu g / m^3$ | 8.6 | 100 |
| 5 6 | Lead | IS-5182(Part22) - 2004 | 0.25 | 0.28. | 0.22 | μg / m³ | 0.2 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.25 | 0.36 | 0.37 | mg/m³ | 0.3 | 2 |
| 8 | CO Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.27 | 1.28 | 1.39 | ng/m³ | 1.3 | 20 |

INFERENCE

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10098

Report Issued Date: 15.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

V<mark>yasanakere, Hanumanahalli Village,</mark> Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt 6. Analysis Starting Date

11.10.2022 12.10.2022

7. Analysis Completion Date

15.10.2022

Sample Tested as Received

| *** | 8. Sample Tested a | | Sh | ift wise re | sults | Units | Result in | Tolerance limits |
|------|--|----------------------------|-------|-------------|-------|---------|-----------|---------------------|
| S.No | Parameter | Protocols | 1 | 2 | 3 | | Avg. | IIIIIG |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 1 |
| 12 | (BaP) Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits INFERENCE

End of The Report:-

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019377F

Report Issued Date: 15.10.2022

Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Vysanakere Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample Date of Sample Receipt

11.10.2022

5. **Analysis Starting Date**

12.10.2022 15.10.2022

Analysis Completion Date 7.

| | | Protocols | Shift | t wise resu | lts | Units | Result in Avg. | Tolerance limits |
|------|---|----------------------------|-------|-------------|-------|---------|-------------------|---------------------|
| S.No | Parameter | Protocois | 1 | 2 | 3 | | III Avg. | mines |
| 1 | Particulate Matter | IS-5182(Part-23) - 2006 | 52.6 | 51.4 | 50.3 | μg / m³ | 51.4 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 27.3 | 25.6 | 23.2 | μg / m³ | 25.4 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 11.6 | 10.1 | 9.5 | μg / m³ | 10.4 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) – 2006 | 16.1 | 14.9 | 13.1 | μg / m³ | 14.7 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 7.6 | 7.8 | 7.9 | μg / m³ | 7.8 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.031 | 0.036 | 0.035 | μg / m³ | 0.0 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.35 | 0.26. | 0.39 | mg/m³ | 0.4 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.0.1 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.22 | 1.23 | 1.25 | ng/m³ | 1.2 | 20 |

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

e Report:-

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10100

Report Issued Date: 15.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Vysanakere Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

11.10.2022 12.10.2022

6. Analysis Starting Date **Analysis Completion Date**

15.10.2022

Sample Tested as Received

| | 8. Sample Tested a | Protocols | Shift wise results | | | Units Result Avg. | | Tolerance limits |
|------|--|-------------------------|--------------------|-------|-------|-------------------|-------|---------------------|
| S.No | Parameter | Protocols | 1 | 2 | 3 | | Avg | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | (BaP) Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

-: End of The Report:-

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/16/03

Authorized Signature

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019376F

Report Issued Date: 15.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Gunda Village Name of the location

MSV Analytical Laboratories, Bellary. Sample Collected By

3. Sample collected with RDS APM 460 and FDS GTI-131 Particulars of the sample

11.10.2022 **Date of Sample Receipt** 5. **Analysis Starting Date** : 12.10.2022 : 15.10.2022 7. Analysis Completion Date

Sample Tested as Received

| CN- | Parameter | Protocols | Shi | ft wise resu | lts | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|-------|--------------|-------|---------------------|-------------------|---------------------|
| S.No | Parameter | - Y | 1 | 2 | 3 | V | m Avg. | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 56.3 | 55.4 | 53.6 | μg / m³ | 55.1 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 20.5 | 18.4 | 17.6 | μg / m³ | 18.8 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 9.9 | 9.6 | 8.1 | μg / m ³ | 9.2 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) - 2006 | 17.9 | 16.5 | 13.8 | $\mu g / m^3$ | 16.1 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 12.5 | 11.6 | 10.6 | $\mu g / m^3$ | 11.6 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.025 | 0.035 | 0.029 | μg / m³ | 0.02 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.35 | 0.42 | 0.55 | mg/m³ | 0.4 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.18 | 1.35 | 1.39 | ng/m³ | 1.3 | 20 |

As per NAAQS Standards INFERENCE

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

-: End of The Report:-

1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellarv.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10099

Report Issued Date: 15.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

11.10.2022 12.10.2022

Analysis Starting Date Analysis Completion Date

15.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|-------|--|----------------------------|--------------------|-------|-------|---------|----------------|---------------------|
| 5.110 | | | 1 | 2 | 3 | | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

| INFERENCE | As per NAAQS Standards |
|-----------|--|
| | Report Status:- The analyzed values for above measured parameter are within the limits |
| | |

Verified by

Authorized Signature

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue, 3, This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only, 5. Sampling is not done by us unless otherwise specified, 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/16/03

E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Report Issued Date: 21.10.2022

Test Report No: TC720722000019637F

M/s. The Sandur Manganese & Iron Ores Ltd.

Name of the Project

(Metal & Ferro Alloys Plant) Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Smiore Colony

MSV Analytical Laboratories, Bellary. Name of the location

Sample collected with RDS APM460 and FDS GTI-131 2. Sample Collected By 3. Particulars of the sample 4.

17.10.2022 Date of Sample Receipt 18.10.2022 5. **Analysis Starting Date** 21.10.2022 **Analysis Completion Date**

| | 8. Sample Tested as Re | Protocols | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|--------------------|-------|-------|---------------------|--|---------------------|
| S.No | | | 1 | 2 | 3 | | | |
| | | IS-5182(Part-23) - | 59.2 | 58.5 | 57.1 | $\mu g / m^3$ | 58.3 | 100 |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | 2006 | | | 20.6 | μg / m³ | 23.7 | 60 |
| 2 | Particulate Matter or | LAB SOP MSVAL/SOP/A/005 | 24.8 | 23.6 | 22.6 | μв / | THE STATE OF THE S | 00 |
| 2 | PM _{2.5} μg/m ³ | IS-5182(Part-2) - | 11.2 | 10.5 | 9.1 | $\mu g / m^3$ | 10.3 | 80 |
| 3 | Sulphur Dioxide as SO _x | 2001 | - 1 | | | | 18.9 | 80 |
| - T | Oxides of Nitrogen as NO _x | IS-5182(Part-6) - 2006 | 20.1 | 18.8 | 17.8 | μg / m ³ | | |
| 4 | | | 9.2 | 9.8 | 8.4 | μg / m³ | 9.1 | 100 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 7.2 | 0.29 | 0.32 | μg / m³ | 1 | 1 |
| | | IS-5182(Part22) - | 0.21 | | | μg / III· | | |
| 6 | Lead | LAB SOP | 0.25 | 0.32 | 0.38 | mg/m³ | 0.4 | 2 |
| 7 | Carbon Monoxide as | MSVAL/SOP/A/007 | 0.35 | | 0.01 | μg / m³ | <0.01 | 400 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | - | | 30 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.20 | 1.23 | 1.25 | ng / m ³ | 1.2 | 20 |

| | As per NAAQS Standards Report Status: The analyzed values for above measured parameter are within the limits | |
|-----------|--|--|
| INFERENCE | Report Status:- The analyzed values for above measurer | |

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will Note: 1. The results listed only to the tested samples & applicable parameters,

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

Authorized Signature

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10263

Report Issued Date: 21.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

Sample Collected By Particulars of the sample MSV Analytical Laboratories, Bellary. Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

17.10.2022

Analysis Starting Date **Analysis Completion Date**

18.10.2022 : 21.10.2022

| | . 7 | Shift wise results | | | Units | | Tolerance limits |
|--|--|--|---------------------------|---|---|---|--|
| Parameter | Protocols | 1 | 2 | 3 | | | |
| Benzene as C ₆ H ₆ | IS:5182(part 11) - | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| | | <0.01 | <0.01 | <0.01 | ng / m ³ | <0.01 | 1 |
| (BaP) | AME | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |
| | Parameter Benzene as C ₆ H ₆ Benzo (α) Pyrene | Parameter Protocols Benzene as C ₆ H ₆ IS:5182(part 11) – 2006 Benzo (α) Pyrene (PCB Procedure (BaP) | Parameter Protocols 1 | Parameter Protocols Shift wise results and the second s | Parameter Protocols Shift wise results 1 2 3 Benzene as C ₆ H ₆ IS:5182(part 11) – 2006 <0.01 | Parameter Protocols Shift wise results Units 1 2 3 Benzene as C ₆ H ₆ IS:5182(part 11) – 2006 <0.01 | Shift wise results Units Result in Avg. Benzene as C ₆ H ₆ IS:5182(part 11) – 2006 <0.01 |

Report Status :- The analyzed values for above measured parameter are within the limits INFERENCE

Verified by

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date or issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an ' are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019639F

Report Issued Date: 21.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt 5. Analysis Starting Date

17.10.2022 18.10.2022

: 21.10.2022

| | 8. Sample Tested as Re | Protocols | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|------|---|----------------------------|--------------------|-------|--------|---------------------|-------------------|---------------------|
| S.No | | | 1 | 2 | 3 | | | |
| 4 | Particulate Matter | IS-5182(Part-23) - | 55.2 | 54.8 | 53.6 | μg / m³ | 54.5 | 100 |
| 1 | PM ₁₀ μg/m ³ | LAB SOP | 18.7 | 19.8 | 18.7 | $\mu g / m^3$ | 19.1 | 60 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | MSVAL/SOP/A/005 | 10.7 | | | . /3 | 8.1 | 80 |
| | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 9.4 | 8.1 | 6.9 | μg / m³ | | - |
| 3 | Sulphur Dioxide as sox | IS-5182(Part-6) - 2006 | 16.9 | 15.8 | 14.9 | μg / m³ | 15.9 | 80 |
| 4 | Oxides of Nitrogen as NO_x | | | | | and the same | | |
| 4 | | | 8.5 | 8.9 | 8.4 | $\mu g / m^3$ | 8.6 | 100 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | | 0.05 | 0.36 | μg / m ³ | 0.3 | 1 |
| | IS-5182(Part22) - 0.32 0.35 Lead 2004 | | 0.50 | P87 | | | | |
| 6 | | LAB SOP | 0.32 | 0.28 | 0.23 | mg/m³ | 0.3 | 2 |
| 7 | Carbon Monoxide as | MSVAL/SOP/A/007 | 0.52 | 0.20 | 1 2000 | | | 400 |
| | | LAB SOP | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 8 | Ammonia as NH ₃ | MSVAL/SOP/A/006 | | | | /3 | 3 1.3 | 20 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.35 | 1.30 | 1.32 | ng / m³ | 1.5 | |

Report Status:- The analyzed values for above measured parameter are within the limits INFERENCE

Verified by



Authorized Signature

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed. 1. The results listed only to the tested samples & applicable parameters,

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising media without our special permission in writing the court of law & should not be used in any advertising the court of law & should not be used in any advertising the law advertise in the court of law & should not be used in any advertising the law advertise in the court of law & should not be used in any advertise in the law advertise in the court of law & should not be used in any advertise in the law adv

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10265

Report Issued Date: 21.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131

Analysis Starting Date Analysis Completion Date 17.10.2022 18.10.2022 21.10.2022

| Parameter | | 1 | Shift wise results | | | Result in Avg. | Tolerance limits |
|---|--------------------|--|--------------------|---|--|--|---------------------|
| I urumour | Protocols | 1 | 2 | 3 | | | |
| enzene as C ₆ H ₆ | IS:5182(part 11) - | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| Mark the second | | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 1 |
| BaP) | | 10.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |
| e 3 | nzo (α) Pyrene | nzene as Cerie 2006 nzo (α) Pyrene CPCB Procedure aP) | 2006 2006 | nzene as C ₆ H ₆ 2006 nzo (α) Pyrene CPCB Procedure 20.01 <0.01 20.01 | nzene as C ₆ H ₆ 2006 nzo (α) Pyrene 2006 CPCB Procedure 2001 <0.01 <0.01 20.01 | nzene as C ₆ H ₆ 2006 2001 20.01 ng / m ³ nzo (α) Pyrene aP) 2008 2001 20.01 20.01 ng / m ³ aP) 2008 2008 2001 20.01 20.01 ng / m ³ | nzene as C_6H_6 |

| INFERENCE | As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits |
|-----------|---|

Verified by

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part 8 cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount, Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an ' are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019640F

Report Issued Date: 21.10.2022

Name of the Project

2.

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka. Vysanakere Village

Name of the location

MSV Analytical Laboratories, Bellary.

Sample Collected By 3. Particulars of the sample 4.

Date of Sample Receipt

17.10.2022

5. Analysis Starting Date 6.

18.10.2022 21.10.2022

| | 8. Sample Tested as Re | 130 2 0 | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|--------------------|--------|----------------|---------------|-------------------|---------------------|
| S.No | Parameter | Protocols | 1 | 2 | 3 | | | 100 |
| | | IS-5182(Part-23) - | 53.1 | 52.8 | 51.2 | $\mu g / m^3$ | 52.4 | 100 |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | 2006 | 33.1 | | 7 | μg / m³ | 17.4 | 60 |
| | Particulate Matter or | LAB SOP MSVAL/SOP/A/005 | 18.3 | 17.1 | 16.8 | µg / ш | | |
| 2 | PM _{2.5} μg/m ³ | IS-5182(Part-2) - | 8.5 | 7.9 | 7.2 | $\mu g / m^3$ | 7.9 | 80 |
| 3 | Sulphur Dioxide as SO _x | 2001 | | | | | 17.4 | 80 |
| | Oxides of Nitrogen as | IS-5182(Part-6) - | 18.4 | 17.5 | 16.4 | μg / m³ | 17.4 | |
| 4 | NO _x | 2006 | 7.5 | 7.2 | 7.6 | μg / m³ | 7.4 | 100 |
| 1994 | Ozone as O ₃ | IS 5182(part-9)1974 | 7.5 | 7.5 | land alternate | / 3 | 0.2 | 1 |
| 5_ | Ozone uz sz | IS-5182(Part22) - | 0.15 | 0.18 | 0.16 | μg / m³ | 0.2 | |
| 6 | Lead | 2004 LAB SOP | 0.24 | 0.30 | 0.25 | mg/m³ | 0.3 | 2 |
| 7 | Carbon Monoxide as | MSVAL/SOP/A/007 | 0.34 | | 0.01 | μg / m³ | <0.01 | 400 |
| | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.0.1 | <0.01 | - | | 20 |
| 8 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.25 | 1.26 | 1.29 | ng / m³ | 1.3 | 20 |

Report Status:- The analyzed values for above measured parameter are within the limits INFERENCE

Verified by

Authorized Signature

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed 3months from the date of issue of test certificate unless otherwise specified. Note: 1. The results listed only to the tested samples & applicable parameters,

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10266

Report Issued Date: 21.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant) Vyasanakere, Hanumanahalli Village,

Hospet Taluk, Bellary District, Karnataka.

Name of the location

Vysanakere Village

Sample Collected By Particulars of the sample MSV Analytical Laboratories, Bellary.

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

17.10.2022 18.10.2022

Analysis Completion Date

21.10.2022

| | | Protocols | Shi | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|------|--|-------------------------|-------|-------------|-------|---------|----------------|---------------------|
| S.No | Parameter | Protocois | 1 | 2 | 3 | | | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 1 |
| 12 | (BaP) Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

As per NAAQS Standards Report Status:- The analyzed values for above measured parameter are within the limits INFERENCE

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of lest certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part 8 cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019638F

Report Issued Date: 21.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location 2.

Gunda Village MSV Analytical Laboratories, Bellary.

Sample Collected By 3.

Sample collected with RDS APM460 and FDS GTI-131

Particulars of the sample 4. **Date of Sample Receipt** 5.

17.10.2022

Analysis Starting Date Analysis Completion Date 7.

18.10.2022 21.10.2022

| | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|--------|---|----------------------------|--------------------|-------|-------|---------------------|-------------------|---------------------|
| S.No | | | 1 | 2 | 3 | | | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 54.2 | 53.7 | 52.6 | μg / m³ | 53.5 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 19.7 | 18.4 | 17.2 | μg / m³ | 18.4 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 7.4 | 6.8 | 6.1 | μg / m³ | 6.8 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 16.5 | 16.4 | 14.8 | μg / m³ | 15.9 | 80 |
| | Ozone as O ₃ | IS 5182(part-9)1974 | 7.2 | 7.9 | 7.5 | μg / m³ | 7.5 | 100 |
| 5 6 | Lead | IS-5182(Part22) - 2004 | 0.02 | 0.05 | 0.07 | μg / m³ | 0.02 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.27 | 0.23 | 0.19 | mg/m³ | 0.2 | 2 |
| 8 | CO Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m ³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.25 | 1.29 | 1.30 | ng / m³ | 1.3 | 20 |

INFERENCE

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be Note: 1. The results listed only to the tested samples & applicable parameters,

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4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellarv.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10264

Report Issued Date: 21.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

: 17.10.2022 : 18.10.2022

7. Analysis Completion Date

: 21.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise re | sults | Units | Result in | Tolerance |
|------|--|----------------------------|-------|-------------|-------|---------|-----------|-----------|
| 5 | A di dinetei | 1.000000 | 1 | 2 | 3 | | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

| in a second | |
|-------------|---|
| INFERENCE | As per NAAQS Standards Report Status:- The analyzed values for above measured parameter are within the limits |

Verified by

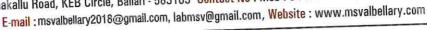
Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019823F

Report Issued Date: 24.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

Sample Collected By Particulars of the sample MSV Analytical Laboratories, Bellary. Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt Analysis Starting Date Analysis Completion Date

19.10.2022 20.10.2022 : 24.10.2022

| | 8. Sample Tested as R | | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|---------------|--|----------------------------|--------------------|-------|-------|---------------------|-------------------|---------------------|
| S.No | Parameter | Protocols | 1 | 2 | 3 | | | |
| 1 | Particulate Matter | IS-5182(Part-23) - 2006 | 57.6 | 56.3 | 54.2 | $\mu g / m^3$ | 56.0 | 100 |
| 2 | PM ₁₀ μg/m ³ Particulate Matter or | LAB SOP MSVAL/SOP/A/005 | 28.5 | 26.3 | 24.6 | μg / m³ | 26.5 | 60 |
| 3 | PM _{2.5} μg/m ³ Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 10.3 | 8.9 | 8.7 | μg / m ³ | 9.3 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 15.7 | 15.1 | 12.7 | μg / m³ | 14.5 | 80 |
| | NO _x Ozone as O ₃ | IS 5182(part-9)1974 | 10.2 | 11.4 | 9.2 | μg / m ³ | 10.3 | 100 |
| <u>5</u> 6 | Lead | IS-5182(Part22) - 2004 | 0.034 | 0.030 | 0.026 | μg / m ³ | 0.03 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.40 | 0.44 | 0.32 | mg/m³ | | 2 |
| | CO Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | + |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.32 | 1.24 | 1.26 | ng/m³ | 1.3 | 20 |

Report Status:- The analyzed values for above measured parameter are within the limits INFERENCE

Note: 1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writin

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10329

Report Issued Date: 24.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt **Analysis Starting Date**

19.10.2022 20.10.2022

Analysis Completion Date

24.10.2022

Sample Tested as Received

| S.No | Parameter Protocols | | Sh | ift wise re | sults | Units | Result in | Tolerance limits |
|------|--|----------------------------|-------|-------------|-------|---------------------|-----------|---------------------|
| S.NO | Farameter | 1100000 | 1 | 2 | 3 | | Avg. | IIIIIG |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m ³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

As per NAAQS Standards INFERENCE Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019824F

Report Issued Date: 24.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Kallahalli Village Name of the location

MSV Analytical Laboratories, Bellary. Sample Collected By

Sample collected with RDS APM460 and FDS GTI-131 3. Particulars of the sample 4. 19.10.2022

Date of Sample Receipt 5. 20.10.2022 **Analysis Starting Date** 24.10.2022 **Analysis Completion Date**

| | 8. Sample Tested as R | Protocols | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|--------|--|----------------------------|--------------------|-------|-------|---------------|-------------------|---------------------|
| S.No | | | 1 | 2 | 3 | | | |
| 1 | Particulate Matter PM ₁₀ µg/m³ | IS-5182(Part-23) - 2006 | 58.8 | 57.2 | 55.4 | μg / m³ | 57.1 | 100 |
| 2 | Particulate Matter or | LAB SOP MSVAL/SOP/A/005 | 20.3 | 18.4 | 17.5 | μg / m³ | 18.7 | 60 |
| 3 | PM _{2.5} µg/m ³ Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 10.6 | 9.9 | 8.6 | $\mu g / m^3$ | 9.7 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 16.7 | 15.8 | 13.9 | μg / m³ | 15.5 | 80 |
| | **** | IS 5182(part-9)1974 | 10.2 | 9.5 | 8.3 | $\mu g / m^3$ | 9.3 | 100 |
| 5 6 | Ozone as O ₃ | IS-5182(Part22) - 2004 | 0.026 | 0.030 | 0.022 | μg / m³ | 0.02 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.34 | 0.39 | 0.30 | mg/m³ | 0.3 | 2 |
| 8 | CO Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.20 | 1.15 | 1.10 | ng / m³ | 1.2 | 20 |

Report Status:- The analyzed values for above measured parameter are within the limits INFERENCE

Verified by

Authorized Signature

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will Note: 1. The results listed only to the tested samples & applicable parameters,

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writin

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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Sanganakallu Road, KEB Circle, Bellary-583103. Contact No: Mob: 94498 03895, (0): 08392-255169,

E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10330

Report Issued Date: 24.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

Kallahalli Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt
 Analysis Starting Date

19.10.2022 20.10.2022

7. Analysis Completion Date

24.10.2022

8. Sample Tested as Received

Parameter

Protocols

Shift wise results

1 2 3

Units Result in Avg. Tolerance limits

182(part 11) - <0.01 <0.01 <0.01 $\mu g/m^3$ <0.01 5

| | | | 1 | 2 | 3 | | Avg. | limits |
|----|--|----------------------------|-------|-------|-------|---------|-------|--------|
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

INFERENCE

S.No

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

[.] The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of some of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an *



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019826F

Report Issued Date: 24.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Vysanakere Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date Analysis Completion Date**

19.10.2022 20.10.2022 24.10.2022

| | Parameter | Protocols | Shift | wise resu | lts | Units | Result in Avg. | Toleranc e limits |
|------|---|----------------------------|---------|-----------|-------|---------------------|-------------------|----------------------|
| S.No | | | 1 | 2 | 3 | | | |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 53.4 | 54.5 | 51.6 | μg / m³ | 53.2 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 29.6 | 30.4 | 26.4 | μg / m³ | 28.8 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 10.2 | 10.7 | 8.6 | μg / m³ | 9.8 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) – 2006 | 15.2 | 15.7 | 12.7 | μg / m³ | 14.5 | 80 |
| | 16/17/6/20 | IS 5182(part-9)1974 | 8.3 | 7.2 | 6.4 | $\mu g / m^3$ | 7.3 | 100 |
| 5 | Ozone as O ₃ | | - Cases | 27759200 | 0.040 | /3 | 0.02 | 1 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.020 | 0.024 | 0.018 | μg / m ³ | 0.02 | |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.28 | 0.26 | 0.24 | mg/m³ | 0.3 | 2 |
| 8 | CO Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.0.1 | <0.01 | μg / m ³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.20 | 1.26 | 1.16 | ng/m³ | 1.2 | 20 |

INFERENCE

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10332

Report Issued Date: 24.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

on

Vysanakere Village

Sample Collected By
 Particulars of the sample

: MSV Analytical Laboratories, Bellary.

Particulars of the sample
 Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131

6. Analysis Starting Date

19.10.2022 20.10.2022

7. Analysis Completion Date

20.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise r | esults | Units | Result in | Tolerance |
|------|--|----------------------------|-------|------------|--------|---------|-----------|-----------|
| | | | 1 | 2 | 3 | | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

| INFERENCE | As per NAAQS Standards |
|-----------|---|
| | Report Status :- The analyzed values for above measured parameter are within the limits |

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of sample of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an *



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

Report Issued Date: 24.10.2022

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019825F

M/s. The Sandur Manganese & Iron Ores Ltd.

1. Name of the Project

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

19.10.2022

Analysis Starting Date 7. **Analysis Completion Date**

20.10.2022 24.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise res | sults | Units | Result | |
|------|---|----------------------------|-------|--------------|-------|---------|---------|--------|
| | | | 1 | 2 | 3 | Joines | in Avg. | limits |
| 1 | Particulate Matter PM ₁₀ μg/m ³ | IS-5182(Part-23) - 2006 | 57.4 | 56.3 | 54.4 | µg / m³ | 56.0 | 100 |
| 2 | Particulate Matter or PM _{2.5} μg/m ³ | LAB SOP MSVAL/SOP/A/005 | 21.3 | 20.4 | 18.6 | μg / m³ | 20.1 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 9.5 | 8.3 | 6.7 | μg / m³ | 8.2 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) - 2006 | 16.9 | 15.3 | 14.5 | μg / m³ | 15.6 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 11.2 | 10.2 | 9.6 | μg / m³ | 10.3 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.019 | 0.030 | 0.018 | μg / m³ | 0.03 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.38 | 0.35 | 0.30 | mg/m³ | 0.3 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.30 | 1.26 | 1.22 | ng/m³ | 1.3 | 20 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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Sanganakallu Road, KEB Circle, Bellary-583103. Contact No: Mob: 94498 03895, (0): 08392-255169,

E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10331

Report Issued Date: 24.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

: 19.10.2022 : 20.10.2022

Analysis Starting Date
 Analysis Completion Date

: 24.10.2022

3. Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise re | esults | Units | Result in | Tolerance |
|------|--|----------------------------|-------|-------------|--------|---------|-----------|-----------|
| | | | 1 | 2 | 3 | James | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

Report:

INFERENCE

As per NAAOS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Auth



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019951F

Report Issued Date: 27.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

22.10.2022 24.10.2022

Analysis Completion Date

27.10.2022

| | 8. Sample Tested as R | | Shift | wise resu | lts | Units | Result in Avg. | Tolerance limits |
|--------|--|---|-------|-----------|-------|---------------------|-------------------|---------------------|
| S.No | Parameter | Protocols | 1 | 2 | 3 | | | |
| 1 | Particulate Matter PM ₁₀ µg/m³ | IS-5182(Part-23) - 2006 | 58.9 | 56.1 | 55.4 | $\mu g / m^3$ | 56.8 | 100 |
| 2 | Particulate Matter or | LAB SOP MSVAL/SOP/A/005 | 23.1 | 22.4 | 21.2 | μg / m³ | 22.2 | 60 |
| 3 | PM _{2.5} μg/m ³ Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 11.4 | 9.9 | 9.5 | μg / m ³ | 10.3 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 19.4 | 18.8 | 16.9 | μg / m³ | 18.4 | 80 |
| | NO _x | IS 5182(part-9)1974 | 11.6 | 10.8 | 9.2 | μg / m³ | 10.5 | 100 |
| 5 6 | Ozone as O ₃ | IS-5182(Part22) - 2004 | 0.029 | 0.021 | 0.024 | μg / m³ | 0.0 | 1 |
| | Carbon Monoxide as | LAB SOP | 0.34 | 0.31 | 0.28 | mg/m³ | 0.3 | 2 |
| 7 | CO Ammonia as NH ₃ | MSVAL/SOP/A/007 LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.32 | 1.31 | 1.29 | ng/m³ | 1.3 | 20 |

INFERENCE

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will Note: 1. The results listed only to the tested samples & applicable parameters,

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writin

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

Authorized Signature

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10449

Report Issued Date: 27.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Smiore Colony

MSV Analytical Laboratories, Bellary.

Sample Collected By Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

22.10.2022 24.10.2022

6. Analysis Starting Date **Analysis Completion Date**

27.10.2022

Sample Tested as Received

| C No | Parameter | Protocols | Sh | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|-------|-------------|-------|---------|-------------------|---------------------|
| S.No | Parameter | Trococois | 1 | 2 | 3 | | Avg. | minus |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

| INFERENCE | As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits |
|-----------|---|

Verified by

are not accredited by NABL.

id of The Report:

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an *



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor)
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 08392-255169,

E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019952F

Report Issued Date: 27.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Allovs Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample5. Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131 22.10.2022

Date of Sample Receipt
 Analysis Starting Date
 Analysis Completion Date

: 24.10.2022 : 27.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Shi | ft wise res | ults | Units | Result | Tolerance |
|------------------------|---|----------------------------|-------|-------------|-------|---------|---------|-----------|
| Name of Name of Street | | | 1 | 2 | 3 | | in Avg. | limits |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 52.4 | 51.3 | 50.4 | μg / m³ | 51.4 | 100 |
| 2 | Particulate Matter or PM _{2.5} μg/m ³ | LAB SOP MSVAL/SOP/A/005 | 18.6 | 17.4 | 16.8 | μg / m³ | 17.6 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 8.6 | 7.4 | 6.2 | μg / m³ | 7.4 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) – 2006 | 15.7 | 14.7 | 13.6 | μg / m³ | 14.7 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 8.4 | 7.6 | 6.2 | μg / m³ | 7.4 | 100 |
| 6 | Lead | IS-5182(Part22) – 2004 | 0.033 | 0.031 | 0.029 | μg / m³ | 0.0 | 1 |
| 7 | Carbon Monoxide as CO | LAB SOP MSVAL/SOP/A/007 | 0.26 | 0.23 | 0.21 | mg / m³ | 0.2 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.26 | 1.22 | 1.20 | ng / m³ | 1.2 | 20 |

INFERENCE

As per NAAOS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Brit of The Report:

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10450

Report Issued Date: 27.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyas<mark>a</mark>nakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary. Sample collected with RDS APM460 and FDS GTI-131

Particulars of the sample Date of Sample Receipt

22.10.2022

Analysis Starting Date

24.10.2022

Analysis Completion Date

: 27.10.2022

Sample Tested as Received

| C.N. | Dayamatar | er Protocols | Sh | ift wise re | sults | Units | Result in | Tolerance limits |
|------|--|----------------------------|-------|-------------|-------|---------|-----------|---------------------|
| S.No | Parameter | Totocois | 1 | 2 | 3 | | Avg. | mines |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

As per NAAQS Standards INFERENCE Report Status:- The analyzed values for above measured parameter are within the limits

-: End of The Report:-

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

Authorized Signature

Report Issued Date: 27.10.2022

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019954F

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location : Vysanakere Village

Sample Collected By : MSV Analytical Laboratories, Bellary.

4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt
 6. Analysis Starting Date
 7. Analysis Completion Date
 22.10.2022
 24.10.2022
 27.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Shi | ft wise res | ults | Units | Result | Toleranc |
|------|---|----------------------------|-------|-------------|-------|---------|---------|----------|
| SiNO | Tarameter | Trotocois | 1 | 2 | 3 | | in Avg. | e limits |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) – 2006 | 53.5 | 52.6 | 51.6 | μg / m³ | 52.6 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 14.6 | 13.2 | 12.4 | μg / m³ | 13.4 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 7.4 | 5.9 | 5.4 | μg / m³ | 6.2 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) – 2006 | 12.3 | 10.6 | 10.5 | μg / m³ | 11.1 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 7.2 | 6.5 | 5.1 | μg / m³ | 6.3 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.026 | 0.024 | 0.024 | μg / m³ | 0.0 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.32 | 0.30 | 0.28 | mg/m³ | 0.3 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.0.1 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.22 | 1.18 | 1.10 | ng / m³ | 1.2 | 20 |

INFERENCE As per NAAQ

As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

End Af The Report:

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor) Sanganakallu Road, KEB Circle, Bellary-583103. Contact No: Mob: 94498 03895, (0): 08392-255169,

E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10452

Report Issued Date: 27.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location Vysanakere Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt 6. Analysis Starting Date

22.10.2022 24.10.2022

Analysis Completion Date

Sample Tested as Received

27.10.2022

| S.No | Parameter Protocols | | Sh | ift wise re | esults | Units | Result in | Tolerance |
|------|--|----------------------------|-------|-------------|--------|---------|-----------|-----------|
| | | K (V) | 1 | 2 | 3 | | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

d of The Report:

INFERENCE

ire not accredited by NABL.

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of ssue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue, 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice

mount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an *



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E-mail:msvalbellary2018@gmail.com, labmsv@gmail.com, Website:www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000019953F

Report Issued Date: 27.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

22.10.2022

Analysis Starting Date Analysis Completion Date

24.10.2022 27.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise res | sults | Units | Result | Tolerance |
|------|---|----------------------------|-------|--------------|-------|---------|---------|-----------|
| | | | 1 | 2 | 3 | | in Avg. | limits |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) – 2006 | 55.3 | 54.2 | 53.2 | μg / m³ | 54.2 | 100 |
| 2 | Particulate Matter or PM _{2.5} μg/m ³ | LAB SOP MSVAL/SOP/A/005 | 20.6 | 19.2 | 18.4 | μg / m³ | 19.4 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 7.5 | 5.9 | 5.1 | μg / m³ | 6.2 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) – 2006 | 15.4 | 14.1 | 12.8 | μg / m³ | 14.1 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 8.9 | 7.2 | 6.1 | μg / m³ | 7.4 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.036 | 0.034 | 0.031 | μg / m³ | 0.0 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.38 | 0.36 | 0.33 | mg/m³ | 0.4 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.32 | 1.31 | 1.29 | ng/m³ | 1.3 | 20 |

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10451

Report Issued Date: 27.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt Analysis Starting Date

22.10.2022 24.10.2022 27.10.2022

Analysis Completion Date

Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise re | esults | Units | Result in | Tolerance |
|-------|--|----------------------------|-------|-------------|--------|---------|-----------|-----------|
| 3.140 | Tarameter | 11000000 | 1 | 2 | 3 | | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

The Report:-

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000020094F

Report Issued Date: 29.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location 2.

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample 4. Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131 24.10.2022

Analysis Starting Date Analysis Completion Date

25.10.2022 29.10.2022

Sample Tested as Received

| | | Protocols | Shift | t wise resu | lts | Units | Result in Avg. | Tolerance |
|------|---|----------------------------|-------|-------------|-------|---------------|-------------------|-----------|
| S.No | Parameter | Protocois | 1 | 2 | 3 | | III Avg. | |
| 1 | Particulate Matter | IS-5182(Part-23) - 2006 | 58.5 | 57.5 | 56.2 | μg / m³ | 57.4 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 23.7 | 22.2 | 21.5 | $\mu g / m^3$ | 22.5 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 10.2 | 9.1 | 8.1 | μg / m³ | 9.1 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 19.3 | 17.8 | 16.3 | μg / m³ | 17.8 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 11.3 | 11.2 | 10.9 | μg / m³ | 11.1 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.032 | 0.030 | 0.027 | μg / m³ | 0.03 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.38 | 0,36 | 0.34 | mg/m³ | 0.4 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.28 | 1.24 | 1.21 | ng / m³ | 1.2 | 20 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

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Sanganakallu Road, KEB Circle, Bellary-583103. Contact No : Mob : 94498 03895, (0) : 08392-255169,

E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10500

Report Issued Date: 29.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

Smiore Colony

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt

6. Analysis Starting Date

24.10.2022 25.10.2022

6. Analysis Starting Date7. Analysis Completion Date

29.10.2022

3. Sample Tested as Received

| S.No | Parameter | Protocols | Sh | ift wise re | sults | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|--------|-------------|-------|---------|-------------------|---------------------|
| | Farameter | 1 | 1 | 2 | 3 | | | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | < 0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

ind of The Report:

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Vorified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No: Mob: 94498 03895, (0): 08392-255169,



E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000020097F

Report Issued Date: 29.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

24.10.2022 25.10.2022

7. Analysis Completion Date

29.10.2022

. Sample Tested as Received

| S.No | Parameter | Protocols | Shift wise results | | | Units | Result | Tolerance |
|-------|---|----------------------------|--------------------|-------|-------|---------|---------|-----------|
| 3.110 | | Trotocois | 1 | 2 | 3 | | in Avg. | limits |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) – 2006 | 56.8 | 55.2 | 54.2 | μg / m³ | 55.4 | 100 |
| 2 | Particulate Matter or PM _{2.5} μg/m ³ | LAB SOP MSVAL/SOP/A/005 | 19.4 | 18.5 | 17.2 | μg / m³ | 18.4 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 10.2 | 8.8 | 8.1 | μg / m³ | 9.0 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) – 2006 | 18,6 | 16.7 | 15.6 | μg / m³ | 17.0 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 8.9 | 7.4 | 6.2 | μg / m³ | 7.5 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.027 | 0.025 | 0.023 | μg / m³ | 0.02 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.28 | 0.26 | 0.24 | mg/m³ | 0.3 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.21 | 1.18 | 1.15 | ng/m³ | 1.2 | 20 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

End of The Report

Authorized Signature

: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor) Sanganakallu Road, KEB Circle, Bellary-583103. Contact No : Mob : 94498 03895, (0) : 08392-255169,

E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10503

Report Issued Date: 29.10.2022

1. Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

3. Particulars of the sample Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt 6. Analysis Starting Date

24.10.2022 25.10.2022

7. Analysis Completion Date

29.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|--------------------|-------|-------|---------|----------------|---------------------|
| | r at afficter | Tietesen | 1 | 2 | 3 | | Avg. | IIIIII |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

| 525241 | |
|-----------|---|
| INFERENCE | As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits |

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000020096F

Report Issued Date: 29.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

3.

Vysanakere Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample 4. **Date of Sample Receipt** 5.

24.10.2022

Analysis Starting Date

25.10.2022 :

Analysis Completion Date

29.10.2022

| C N - | Parameter | Protocols | Shift wise results | | | Units | Result | Toleranc |
|-------|--|----------------------------|--------------------|--------|-------|---------|---------|----------|
| S.No | r ai ainetei | Protocols | 1 | 2 | 3 | | in Avg. | e limits |
| 1 | Particulate Matter PM ₁₀ µg/m ³ | IS-5182(Part-23) - 2006 | 52.7 | 51.2 | 50.4 | μg / m³ | 51.4 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 16.5 | 15.2 | 14.4 | μg / m³ | 15.4 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 9.2 | 8.1 | 7.5 | μg / m³ | 8.3 | 80 |
| 4 | Oxides of Nitrogen as NO _x | IS-5182(Part-6) – 2006 | 16.4 | 14.7 | 13.8 | μg / m³ | 15.0 | 80 |
| 5 | Ozone as O ₃ | IS 5182(part-9)1974 | 8.9 | 8.7 | 8.3 | μg / m³ | 8.6 | 100 |
| 6 | Lead | IS-5182(Part22) - 2004 | 0.028 | 0.024 | 0.021 | μg / m³ | 0.02 | 1 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.32 | 0.30 | 0.27 | mg/m³ | 0.3 | 2 |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.0.1 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.28 | 1.25 | 1.20 | ng / m³ | 1.2 | 20 |

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10502

Report Issued Date: 29.10.2022

1. Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Vysanakere Village

Sample Collected By

: MSV Analytical Laboratories, Bellary.

Particulars of the sample Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131

24.10.2022 25.10.2022 : **Analysis Starting Date** : 29.10.2022 **Analysis Completion Date**

Sample Tested as Received

| | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Tolerance limits |
|------|--|----------------------------|--------------------|-------|-------|---------|----------------|---------------------|
| S.No | | Trotocois | 1 | 2 | 3 | | | |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 1 |
| 12 | (BaP) Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 6 |

As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits INFERENCE

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part 8 cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an ' are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000020095F

Report Issued Date: 29.10.2022

Name of the Project

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

MSV Analytical Laboratories, Bellary.

Sample Collected By

Sample collected with RDS APM460 and FDS GTI-131

Particulars of the sample Date of Sample Receipt

24.10.2022 25.10.2022 29.10.2022

Analysis Starting Date Analysis Completion Date

| | 8. Sample Tested as R | V. (1.7) | Shift | ft wise results | | Units | Result in Avg. | Tolerance limits |
|------|---|----------------------------|-------|---|-------|---------|----------------|---------------------|
| S.No | Parameter | Protocols | 1 | 2 | 3 | | | 500 Section 5 |
| 1 | Particulate Matter | IS-5182(Part-23) - 2006 | 55.8 | 54.2 | 53.6 | μg / m³ | 54.5 | 100 |
| 2 | Particulate Matter or PM _{2.5} µg/m ³ | LAB SOP MSVAL/SOP/A/005 | 20.5 | 19.7 | 18.3 | μg / m³ | 19.5 | 60 |
| 3 | Sulphur Dioxide as SO _x | IS-5182(Part-2) - 2001 | 8.2 | 7.4 | 6.1 | μg / m³ | 7.2 | 80 |
| 4 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 18.7 | 16.9 | 15.7 | μg / m³ | 17.1 | 80 |
| | NOx | IS 5182(part-9)1974 | 8.7 | 8.3 | 7.6 | μg / m³ | 8.2 | 100 |
| 5 | Ozone as O ₃ | IS-5182(Part22) - | 0.038 | 0.034 | 0.030 | μg / m³ | 0.03 | 1 |
| 6 | Lead | 2004 | 0.030 | 1 To | | , , | 0.3 | 2 |
| 7 | Carbon Monoxide as | LAB SOP MSVAL/SOP/A/007 | 0.30 | 0.27 | 0.24 | mg/m³ | 2000000 | |
| 8 | Ammonia as NH ₃ | LAB SOP MSVAL/SOP/A/006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 400 |
| 9 | Nickel as Ni | LAB SOP MSVAL/SOP/A/008 | 1.25 | 1.22 | 1.17 | ng / m³ | 1.2 | 20 |

INFERENCE

Report Status :- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/10501

Report Issued Date: 29.10.2022

Name of the Project

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

4. Particulars of the sample Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date** 6. **Analysis Completion Date** 7.

24.10.2022 25.10.2022 29.10.2022

Sample Tested as Received

| S.No | Parameter | Protocols | Shift wise results | | Units | Result in | Tolerance | |
|------|--|----------------------------|--------------------|-------|-------|-----------|-----------|--------|
| | | | 1 | 2 | 3 | | Avg. | limits |
| 10 | Benzene as C ₆ H ₆ | IS:5182(part 11) - 2006 | <0.01 | <0.01 | <0.01 | μg / m³ | <0.01 | 5 |
| 11 | Benzo (α) Pyrene (BaP) | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng/m³ | <0.01 | 1 |
| 12 | Arsenic as As | CPCB Procedure | <0.01 | <0.01 | <0.01 | ng / m³ | <0.01 | 6 |

INFERENCE

As per NAAQS Standards

Report Status:- The analyzed values for above measured parameter are within the limits

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000019605F

M/s. The Sandur Manganese & Iron Ores Ltd.

Report Issued Date: 21.10.2022

Name of the Industry

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Stack ID Coke Screening & Store

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of Sample Collected 4.

Sample collected with VSS - 1

Date of Sample Receipt 5.

15.10.2022

Analysis Starting Date 6.

18.10.2022

Analysis Completion Date 7.

21.10.2022

Sample Tested as Received 8

GENERAL DETAILS

| Date of Monitoring | 15.10.2022 |
|---------------------------|------------|
| Fuel Used | |
| Stack Temperature (°C) | 42 |
| Velocity (m/s) | 6.1 |
| Height (m) | 15mtrs AGL |
| Diameter (m) | 0.7 |
| Cross sectional area (m²) | 0.38465 |

RESULTS

| Parameters | Protocol | Unit | Result | GSR 277 (E) Standards |
|------------------------|------------------------|--------|--------|--------------------------|
| Particulate Matter | IS-11255(Part1) - 1985 | mg/Nm³ | 28.3 | 50 |
| Sulphur dioxide | IS-11255(Part2) - 1985 | mg/Nm³ | 17.4 | 800 |
| Nitrogen dioxide | IS-11255(Part7) - 2005 | mg/Nm³ | 14.2 | 500 |
| Carbon Monoxide as(CO) | IS 13270 | % | 0.26 | Max 1% |

As per GSR 277 (E) Standards. Report Status:- The analyzed value for above measured parameter is **INFERENCE** within the limits.

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015) C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor) Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 08392-255169, E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000019751F

Report Issued Date: 21.10.2022

Name of the Industry

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Stack ID **Coke Cutter**

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of Sample Collected

Sample collected with VSS - 1

Date of Sample Receipt 6. **Analysis Starting Date**

15.10.2022 18.10.2022

Analysis Completion Date

21.10.2022

Sample Tested as Received

GENERAL DETAILS

| CIATIVAL AND IN | |
|---------------------------|------------|
| Date of Monitoring | 15.10.2022 |
| Fuel Used | 17. |
| Stack Temperature (°C) | 47 |
| Velocity (m/s) | 5.5 |
| Height (m) | 15mtrs AGL |
| Diameter (m) | 0.7 |
| Cross sectional area (m²) | 0.38465 |

PECIII TC

| KESULIS | | | | | | | |
|------------------------|------------------------|--------|--------|--------------------------|--|--|--|
| Parameters | Protocol | Unit | Result | GSR 277 (E) Standards | | | |
| Particulate Matter | IS-11255(Part1) - 1985 | mg/Nm³ | 26.2 | 50 | | | |
| Sulphur dioxide | IS-11255(Part2) - 1985 | mg/Nm³ | 13.5 | 800 | | | |
| Nitrogen dioxide | IS-11255(Part7) - 2005 | mg/Nm³ | 12.4 | 500 | | | |
| Carbon Monoxide as(CO) | IS 13270 | % | 0.24 | Max 1% | | | |

| As per KSPCB Standards Report Status: The analyzed value for above measured parameter is |
|--|
| Report Status: The analyzed value for above measured parameter is |
| within the limits. |
| |

Verified by

Authorized Signature





Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 08392-255169,



E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000019606F

Name of the Industry

2.

Stack ID

: M/s. The Sandur Manganese & Iron Ores Ltd.

Report Issued Date: 21.10.2022

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

: Coal Crushing Area

3. Sample Collected By : MSV Analytical Laboratories, Bellary.

. Particulars of Sample Collected : Sample collected with VSS - 1

5. Date of Sample Receipt : 18.10.2022 6. Analysis Starting Date : 19.10.2022 7. Analysis Completion Date : 22.10.2022

8. Sample Tested as Received

GENERAL DETAILS

| Date of Monitoring | 18.10.2022 |
|---------------------------|------------|
| Fuel Used | -U7 |
| Stack Temperature (°C) | 50 |
| Velocity (m/s) | 6.5 |
| Height (m) | 15mtrs AGL |
| Diameter (m) | 0.75 |
| Cross sectional area (m²) | 0.44156 |

RESULTS

| Parameters | Protocol | Unit | Result | GSR 277 (E) Standards |
|------------------------|------------------------|--------|--------|--------------------------|
| Particulate Matter | IS-11255(Part1) - 1985 | mg/Nm³ | 24.6 | 50 |
| Sulphur dioxide | IS-11255(Part2) - 1985 | mg/Nm³ | 16.2 | 800 |
| Nitrogen dioxide | IS-11255(Part7) - 2005 | mg/Nm³ | 9.4 | 500 |
| Carbon Monoxide as(CO) | IS 13270 | % | 0.20 | Max 1% |

| As per KSPCB Standards Report Status :- The analyzed value for above measured parameter is within the limits. |
|---|
| |

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

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Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No: Mob: 94498 03895, (0): 08392-255169,

E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000019610F

Name of the Industry

2.

M/s. The Sandur Manganese & Iron Ores Ltd.

Report Issued Date: 21.10.2022

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Stack ID : DG Set 750 KVA

3. Sample Collected By : MSV Analytical Laboratories, Bellary.

Particulars of Sample Collected : Sample collected with VSS - 1

5. Date of Sample Receipt : 15.10.2022 6. Analysis Starting Date : 18.10.2022 7. Analysis Completion Date : 21.10.2022

8. Sample Tested as Received

GENERAL DETAILS

| GETTER DE L'ITE | | |
|--|------------|--|
| Date of Monitoring | 15.10.2022 | |
| Fuel Used | Diesel | |
| Stack Temperature (°C) | 102 | |
| Velocity (m/s) | 7.7 | |
| Height (m) | 15mtrs AGL | |
| Diameter (m) | 0.3 | |
| Cross sectional area (m ²) | 0.07065 | |

RESULTS

| Parameters | Protocol | Unit | Result | KSPCB Consent Standards |
|--------------------|------------------------|--------|--------|----------------------------|
| Particulate Matter | IS-11255(Part1) - 1985 | mg/Nm³ | 22.4 | 100 |
| Sulphur dioxide | IS-11255(Part2) - 1985 | PPM | 24.4 | 50 |
| Nitrogen dioxide | IS-11255(Part7) - 2005 | PPM | 19.5 | 50 |

| | As per KSPCB Consent Standards. |
|-----------|--|
| INFERENCE | Report Status:- The analyzed value for above measured parameter is |
| | within the limits. |

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.



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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 08392-255169, E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com, Website : www.msvalbellary.com



MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TTC720722000019608F

M/s. The Sandur Manganese & Iron Ores Ltd.

Report Issued Date: 22.10.2022

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Stack ID : Coke Oven Battery - Passes Through WHRB-1

3. Sample Collected By : MSV Analytical Laboratories, Bellary.

4. Particulars of Sample Collected
 5. Date of Sample Receipt
 18.10.2022

6. Analysis Starting Date : 19.10.2022 7. Analysis Completion Date : 22.10.2022

8. Sample Tested as Received

Name of the Industry

2.

GENERAL DETAILS

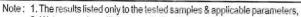
| Date of Monitoring 18 10 2022 | | |
|-------------------------------|--|--|
| 18.10.2022 | | |
| | | |
| 155 | | |
| 8.2 | | |
| 60 mtrs AGL | | |
| 3.4 | | |
| 9.0746 | | |
| | | |

RESULTS

| Parameters | Protocol | Unit | Result | GSR 277 (E) Standards |
|---------------------------|------------------------|--------|--------|--------------------------|
| Particulate Matter | IS-11255(Part1) - 1985 | mg/Nm³ | 35.2 | 50 |
| Sulphur dioxide | IS-11255(Part2) - 1985 | mg/Nm³ | 32.7 | 800 |
| Nitrogen dioxide | IS-11255(Part7) - 2005 | mg/Nm³ | 53.2 | 500 |
| Carbon Monoxide as(CO) | IS 13270 | % | 0.16 | Max 1% |

| MEEDENGE | As per GSR 277 (E) Standards. |
|-----------|--|
| INFERENCE | Report Status: The analyzed value for above measured parameter is within the limits. |

Verified by



Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

^{3.} This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

^{4.} Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.

^{5.} Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No: Mob: 94498 03895, (0): 08392-255169,

E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000019752F

Report Issued Date: 21.10.2022

1. Name of the Industry

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Stack ID

: Ferro Alloy Arc Furnace

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of Sample Collected

: Sample collected with VSS - 1

5. Date of Sample Receipt6. Analysis Starting Date

: 18.10.2022 : 19.10.2022

6. Analysis Starting Date7. Analysis Completion Date

: 22.10.2022

8. Sample Tested as Received

GENERAL DETAILS

| GENERAL DETAILS | | |
|-----------------|--|--|
| 13.09.022 | | |
| 1/ | | |
| 92 | | |
| 7.9 | | |
| 35 mtrs AGL | | |
| 2.5 | | |
| 4.90625 | | |
| | 13.09.022 92 7.9 35 mtrs AGL 2.5 | |

RESULTS

| Parameters | Protocol | Unit | Result | GSR 277 (E) Standards |
|--------------------|------------------------|--------|--------|--------------------------|
| Particulate Matter | IS-11255(Part1) - 1985 | mg/Nm³ | 30.2 | 150 |

INFERENCE

As per GSR 277 (E) Standards.

Report Status:- The analyzed value for above measured parameter is

within the limits.

Verified by

Authorized Signature

ote: 1. The results listed only to the tested samples & applicable parameters,

Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000019609F

Report Issued Date: 22.10.2022 M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Coke Oven Battery - Passes Through WHRB-2

3. Sample Collected By MSV Analytical Laboratories, Bellary.

Particulars of Sample Collected 4.

Sample collected with VSS - 1

Date of Sample Receipt 5. **Analysis Starting Date**

Stack ID

2.

Name of the Industry

18.10.2022

6.

19.10.2022

Analysis Completion Date 7. Sample Tested as Received 8.

22.10.2022

CENERAL DETAILS

| GENERAL DETAILS | | | | |
|---------------------------|-------------|--|--|--|
| Date of Monitoring | 18.10.2022 | | | |
| Fuel Used | | | | |
| Stack Temperature (°C) | 148 | | | |
| Velocity (m/s) | 7.5 | | | |
| Height (m) | 60 mtrs AGL | | | |
| Diameter (m) | 3.4 | | | |
| Cross sectional area (m²) | 9.0746 | | | |

RESULTS

| Parameters | Protocol | Unit | Result | GSR 277 (E) Standards |
|------------------------|------------------------|--------|--------|--------------------------|
| Particulate Matter | IS-11255(Part1) - 1985 | mg/Nm³ | 33.3 | 50 |
| Sulphur dioxide | IS-11255(Part2) - 1985 | mg/Nm³ | 38.5 | 800 |
| Nitrogen dioxide | IS-11255(Part7) - 2005 | mg/Nm³ | 61.2 | 500 |
| Carbon Monoxide as(CO) | IS 13270 | % | 0.19 | Max 1% |

As per GSR 277 (E) Standards. Report Status:- The analyzed value for above measured parameter is **INFERENCE** within the limits.

Verified by

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

REPORT:-

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1.

MSV Analytical Laboratories

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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/17/04

AMBIENT NOISE LEVEL MONITORING REPORT

Test Report No: TC720722000019607F

Report Issued Date: 21.10.2022

Name of the industry

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk,

Bellary District, Karnataka.

Sample Collected By 2.

MSV Analytical Laboratories, Bellary

Date of Monitoring 3.

15.10.2022

Report Date 4. Particulars of Sample Collected 21.10.2022 Noise meter

5. **Method Adopted**

IS 9989

| 6. | Method Adopted | | Day Time Results | | | |
|------|---------------------|----------------------|----------------------|----------------------|-------------------|---------------------------------------|
| S.No | Sample Location | Time Frequency | Maximum in dB(A) Leq | Minimum in dB(A) Leq | Avg. in dB(A) Leq | Permissible limits in dB(A) Leq |
| | - | 09.00 am to 10.00 am | 46.7 | 43.0 | 44.8 | |
| 1 | Smiore Colony | | | 46.2 | 48.3 | |
| 2 | Kallahalli Village | 11.10 am to 12.10pm | 50.4 | | 100.0030 | 1 |
| | | 01.30 pm to 02.30pm | 50.1 | 45.3 | 47.7 | - |
| 3 | Vysanakere Village | 02.00 pm to 3.00 pm | 52.6 | 47.6 | 50.1 | 55 |
| 4 | Gunda Village | | 47.4 | 42.8 | 45.1 | |
| 5 | Hanumanahalli (V) | 03.10 pm to 04.10pm | | | 46.8 | |
| 6 | Venkatagiri Village | 04.30 pm to 05.30pm | 48.9 | 44.7 | | \dashv |
| | | 05.30 pm to 05.30pm | 43.2 | 41.0 | 42.1 | |
| 7 | Ramgad Village | | | 46.2 | 48.5 | |
| 8 | Rajapur Village | 06.30 pm to 06.30pm | 49.0 | 1012 | | |

| INFERENCE | As per CPCB Standards, Report Status :- In the all locations Noise level is within the limits | |
|-----------|--|--|
| | Report Status 1 III and 1 | |

Verified by

END OF REPO

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

^{2.} Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/17/04

uthorized Signature

FUGITIVE NOISE LEVEL MONITORING REPORT

Test Report No: TC720722000019603F

Report Issued Date: 21.10.2022

1. Name of the industry

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk,

Bellary District, Karnataka.

2. Sample Collected By

MSV Analytical Laboratories, Bellary

3. Date of Monitoring

15.10.2022 21.10.2022

Report Date
 Particulars of Sample Collected

: Noise meter

6. Method Adopted

IS 9989

| | | V 7. | Day Time Results | | | | |
|------|------------------------|-------------------------|----------------------------|----------------------------|----------------------|---------------------------------------|--|
| S.No | Sample Location | Time Frequency | Maximum in dB(A) Leq | Minimum in dB(A) Leq | Avg. in dB(A) Leq | Permissible limits in dB(A) Leq | |
| 1 | Near Coal Crusher Area | 09.00 am to 10.00 am | 70.2 | 67.5 | 68.5 | | |
| 2 | Coke Cutting Area | 11.10 am to 12.10pm | 69.8 | 66.8 | 67.5 | | |
| 3 | Coke Screening Area | 01.30 pm to 02.30pm | 72.5 | 68.5 | 70.2 | | |
| 4 | WHRB-1 Area | 02.00 pm to 3.00 pm | 68.5 | 65.9 | 66.5 | 85 | |
| 5 | ARC Furnace Area | 03.10 pm to 04.10pm | 69.2 | 64.5 | 66.5 | | |
| 6 | Power Plante Area | 04.30 pm to 05.30pm | 71.5 | 70.5 | 70.5 | | |
| 7 | Coal Shed Area | 05.30 pm to 05.30pm | 67.8 | 64.5 | 65.5 | * | |
| 8 | Coke Oven Area | 06.30 pm to 06.30pm | 73.6 | 69.5 | 71.5 | 5 | |

| As per CPCB Standards, Report Status :- In the all locations Noise level is within the limits |
|--|
| |

Verified by

Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/10313

1. Name of the Industry

Report Issued Date: 22.10.2022

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant) Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

R.O. Water at SMIORE Plant Premises

MSV Analytical Laboratories, Bellary.

250 ml (Sterilized Bottle)

Good/satisfactory

18.10.2022

: 19.10.2022

: 22.10.2022

2. Sample Type

3. Sample Collected By

4. Sample Quantity 5. Sample description/condition

6. Date of sample Receipt

7. Analysis Starting Date 8. Analysis Completion Date

9. Sample tested as Received

RESULTS

| Parameters | Protocol | Unit | Result | IS 10500:2012 Specification |
|----------------------------|--------------|------------|--------|-----------------------------------|
| Total Coliform Bacteria | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |
| Escherichia Coli | IS 1622:1981 | MPN/100ml | Absent | Shall not be detectable in 100 ml |

IS - 10500 Standards **INFERENCE** Report Status: - The above parameters are within limits.

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER OUALITY

Test Report No: MSVAL/2022/10312

1. Name of the Industry

Report Issued Date: 22.10.2022 M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample location

3. Sample Collected By

4. Sample Quantity

5. Sample Description/condition

6. Date of sample Collection7. Analysis Starting Date

8. Analysis completion Date9. Sample Tested as Received

R.O. Water at SMIORE Plant Premises
MSV Analytical Laboratories, Bellary

: 2 Liters

Good/satisfactory: 18.10.2022

: 19.10.2022 : 22.10.2022

| | | | 1 | | IS 105 | 00-2012 |
|------|------------|---------------------------------------|----------|--------|------------------|----------------------|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit |
| | | Chemical pa | rameters | | | |
| 17 | Copper | IS: 3025(part-42) | mg/l | 0.004 | 0.05 | 1.5 |
| 18 | Manganese | IS: 3025(part-59) | mg/l | 0.002 | 0.1 | 0.3 |
| 19 | Mercury | IS:3025(part- 48)/mercury analyser | mg/l | 0.003 | 0.001 | No Relaxation |
| 20 | Cadmium | IS: 3025(part-41) | mg/l | 0.003 | 0.01 | No Relaxation |
| 21 | Lead | IS: 3025(part-47) | mg/l | 0.001 | 0.05 | No Relaxation |
| 22 | Chromium | IS: 3025(part-52) | mg/l | 0.005 | 0.05 | No Relaxation |
| 23 | Selenium | IS: 3025(part-56) | mg/l | BDL | 0.01 | No Relaxation |
| 24 | Zinc | IS: 3025(part-49) | mg/l | BDL | 5 | 15 |

| INFERENCE | IS 10500 - 2012 Standards |
|-----------|---|
| | DDI D.I. D. t. t.I. Limit |
| | BDL - Below Detectable Limit |
| | Report Status: - The analyzed values for above measured parameters are within the |
| | Acceptable limits. |

Verified by

-: Ind of the Reports

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/19791
1. Name of the Industry

Report Issued Date: 22.10.2022

: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village,

Vyasanakere, Hanumananani Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample location

: R.O. Water at SMIORE Plant Premises

3. Sample Collected By

MSV Analytical Laboratories, Bellary

4. Sample Quantity

: 2 Liters

5. Sample Description/condition

Good/satisfactory: 18.10.2022

6. Date of sample Collection7. Analysis Starting Date

10.10.2022

8. Analysis completion Date

: 19.10.2022 : 22.10.2022

9. Sample Tested as Received

| | | | | | IS 10500-2012 | | |
|------|---|-----------------------|-----------|-----------|------------------|----------------------|--|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit | |
| | | Physical pa | arameters | i | | | |
| 1 | Color | IS: 3025(part-4) | | Colorless | 5 | 15 | |
| 2 | Odor | IS: 3025(part-5) | | Agreeable | Agreeable | Agreeable | |
| 3 | pН | IS: 3025(part-11) | | 7.36 | 6.5-8.5 | No Relaxation | |
| 4 | Turbidity | IS: 3025(part-10) | NTU | 0.28 | 1 | 5 | |
| | A | Chemical p | arameter | S | | | |
| 5 | Alkalinity | IS: 3025(part-23) | mg/l | 62 | 200 | 600 | |
| 6 | Total Dissolved IS: 3025(part-16) | | mg/l | 682 | 500 | 2000 | |
| 7 | Total Hardness as CaCO ₃ IS: 3025(part-21) | | mg/l | 82.2 | 200 | 600 | |
| 8 | Calcium as Ca | IS: 3025(part-40) | mg/l | 28.7 | 75 | 200 | |
| 9 | Magnesium as Mg | IS: 3025(part-46) | mg/l | 2.53 | 30 | 100 | |
| 10 | Sulphate as SO ₄ | IS: 3025(part-24) | mg/l | 14.4 | 200 | 400 | |
| 11 | Chloride as Cl | IS: 3025(part-32) | mg/l | 36.5 | 250 | 1000 | |
| 12 | Nitrate as NO ₃ | IS: 3025(part-34) | mg/l | 0.57 | 45 | No Relaxation | |
| 13 | Iron as Fe | IS: 3025(part-34) | mg/l | BDL | 0.3 | No Relaxation | |
| 14 | Fluoride as F | IS: 3025(part-60) | mg/l | 0.12 | 1.0 | 1.5 | |
| 15 | Sodium as Na | IS 3025(part 45):1993 | mg/l | 6.4 | | | |
| 16 | Potassium as K | Is 3025(part 45):1993 | mg/l | 4.5 | | | |

INFERENCE IS 10500 - 2012 Standards
BDL - Below Detectable Limit
Report Status: - The analyzed values for above measured parameters are within the Acceptable limits.

Verified by

But patha Begort

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/10332

Report Issued Date: 22.10.2022 : M/s. The Sandur Manganese & Iron Ores Ltd.

1. Name of the Industry : M/s. The Sandur Manganese (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Sample Type : Bore Well Water at Ramgad Reservoir

3. Sample Collected By : MSV Analytical Laboratories, Bellary.

4. Sample Quantity : 250 ml (Sterilized Bottle)

5. Sample description/condition : Good/satisfactory

6. Date of sample Receipt : 18.10.2022 7. Analysis Starting Date : 19.10.2022 8. Analysis Completion Date : 22.10.2022

9. Sample tested as Received

RESULTS

| Parameters | Protocol | Unit | Result | IS 10500:2012 Specification |
|----------------------------|--------------|------------|--------|-----------------------------------|
| Total Coliform Bacteria | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |
| Escherichia Coli | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |

INFERENCE IS - 10500 Standards
Report Status: - The above parameters are within limits.

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC720722000019795F

Name of the Industry

Report Issued Date: 22.10.2022

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Bore Well Water at Rajapura Village MSV Analytical Laboratories, Bellary

2 Liters

Good/satisfactory

18.10.2022 19.10.2022 : 22.10.2022

Name of the sample location 2.

Sample Collected By 3. Sample Quantity 4.

Sample Description/condition 5. Date of sample Collection 6.

Analysis Starting Date Analysis completion Date Sample Tested as Received

| 32000 | * | | | | IS 10500-2012 | | |
|----------|-----------------------------|-----------------------|-----------|-----------|------------------|----------------------|--|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit | |
| | | Physical pa | rameters | | | | |
| b | | | T | Colorless | 5 | 15 | |
| 1 | Color | IS: 3025(part-4) | 7 2 | Agreeable | Agreeable | Agreeable | |
| 2 | Odor | IS: 3025(part-5) | 1 | | 6.5-8.5 | No Relaxation | |
| 3 | рН | IS: 3025(part-11) | | 6.88 | | 5 | |
| | • | IS: 3025(part-10) | NTU | 0.48 | 11 | J 3 | |
| 4 | Turbidity | Chemical pa | arameters | S | | (00 | |
| | | IS: 3025(part-23) | mg/l | 162 | 200 | 600 | |
| 5 | Alkalinity | 18 1 8 0 2 0 (p == 7 | | 984 | 500 | 2000 | |
| 6 | Total Dissolved | IS: 3025(part-16) | mg/l | 904 | 300 | | |
| 0 | Solids | | | 2100 | 200 | 600 | |
| 7 | Total Hardness as | IS: 3025(part-21) | mg/l | 310.8 | 200 | | |
| 1 | CaCO ₃ | 12 2025 (most 40) | mg/l | 64.7 | 75 | 200 | |
| 8 | Calcium as Ca | IS: 3025(part-40) | mg/l | 36.21 | 30 | 100 | |
| 9 | Magnesium as Mg | IS: 3025(part-46) | | 42.8 | 200 | 400 | |
| 10 | Sulphate as SO ₄ | IS: 3025(part-24) | mg/l | 132.9 | 250 | 1000 | |
| 11 | Chloride as Cl | IS: 3025(part-32) | mg/l | 2.23 | 45 | No Relaxation | |
| 12 | Nitrate as NO ₃ | IS: 3025(part-34) | mg/l | | 0,3 | No Relaxation | |
| 13 | Iron as Fe | IS: 3025(part-34) | mg/l | BDL | 1.0 | 1.5 | |
| | Fluoride as F | IS: 3025(part-60) | mg/l | 0.34 | | | |
| 14 15 | Sodium as Na | IS 3025(part 45):1993 | mg/l | 16.2 | | | |
| 16 | Potassium as K | Is 3025(part 45):1993 | mg/l | 8.7 | | | |

INFERENCE

IS 10500 - 2012 Standards

Report Status: - The analyzed values for above measured parameters are within the Permissible

limits.

Authorized Signature

1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.

5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellarv.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/10314

Report Issued Date: 22.10.2022

1. Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample location

Bore Well Water at Rajapura VillageMSV Analytical Laboratories, Bellary

3. Sample Collected By

· 2 Liters

4. Sample Quantity5. Sample Description/condition

: Good/satisfactory

6. Date of sample Collection

18.10.2022

7. Analysis Starting Date

: 19.10.2022

Analysis completion Date
 Sample Tested as Received

: 22.10.2022

| | | | | | IS 10500-2012 | |
|------|------------|---------------------------------------|--------|--------|------------------|----------------------|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit |
| | | Chemical para | meters | | | |
| 17 | Copper | IS: 3025(part-42) | mg/l | 0.008 | 0.05 | 1.5 |
| 18 | Manganese | IS: 3025(part-59) | mg/l | 0.002 | 0.1 | 0.3 |
| 19 | Mercury | IS:3025(part- 48)/mercury analyser | mg/l | 0.004 | 0.001 | No Relaxation |
| 20 | Cadmium | IS: 3025(part-41) | mg/l | 0.004 | 0.01 | No Relaxation |
| 21 | Lead | IS: 3025(part-47) | mg/l | 0.002 | 0.05 | No Relaxation |
| 22 | Chromium | IS: 3025(part-52) | mg/l | 0.004 | 0.05 | No Relaxation |
| 23 | Selenium | IS: 3025(part-56) | mg/l | BDL | 0.01 | No Relaxation |
| 24 | Zinc | IS: 3025(part-49) | mg/l | BDL | 5 | 15 |

| INFERENCE | IS 10500 - 2012 Standards |
|-----------|---|
| | BDL - Below Detectable Limit |
| | Report Status: - The analyzed values for above measured parameters are within the |
| | Permissible limits. |

Verified by

Authorized Signature

I. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of some of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & annot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/10315

Report Issued Date: 22.10.2022

1. Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Sample Type

Bore Well Water at Rajapura Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Sample Quantity

250 ml (Sterilized Bottle)

5. Sample description/condition

Good/satisfactory

6. Date of sample Receipt 7. Analysis Starting Date

18.10.2022 19.10.2022

8. Analysis Completion Date

9. Sample tested as Received

22.10.2022

RESULTS

| Parameters | Protocol | Unit | Result | IS 10500:2012 Specification |
|----------------------------|--------------|------------|--------|-----------------------------------|
| Total Coliform Bacteria | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |
| Escherichia Coli | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |

IS - 10500 Standards **INFERENCE** Report Status: - The above parameters are within limits.

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC720722000019796F

Name of the Industry

Report Issued Date: 22.10.2022

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

MSV Analytical Laboratories, Bellary

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka. Bore Well Water at Hanumanhalli Village

Name of the sample location 2.

Sample Collected By 3.

Sample Quantity 4.

Sample Description/condition

Date of sample Collection **Analysis Starting Date** 7.

Analysis completion Date 8.

2 Liters Good/satisfactory

18.10.2022

: 19.10.2022 : 22.10.2022

Sample Tested as Received

| | | _ TV 17 | N.T. | | IS 10500-2012 | | |
|------|---|-----------------------|----------|-----------|------------------|----------------------|--|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit | |
| | | Physical pa | rameters | | | | |
| 1 | Color | IS: 3025(part-4) | | Colorless | 5 | 15 | |
| 2 | Odor | IS: 3025(part-5) | | Agreeable | Agreeable | Agreeable | |
| 3 | рН | IS: 3025(part-11) | | 7.42 | 6.5-8.5 | No Relaxation | |
| 4 | Turbidity | IS: 3025(part-10) | NTU | 0.36 | 1 | 5 | |
| | | Chemical p | arameter | S | | | |
| 5 | Alkalinity | IS: 3025(part-23) | mg/l | 148 | 200 | 600 | |
| 6 | Total Dissolved IS: 3025(part-16) | | mg/l | 764 | 500 | 2000 | |
| 7 | Total Hardness as CaCO ₃ IS: 3025(part-21) | | mg/l | 280.4 | 200 | 600 | |
| 8 | Calcium as Ca | IS: 3025(part-40) | mg/l | 58.7 | 75 | 200 | |
| 9 | Magnesium as Mg | IS: 3025(part-46) | mg/l | 32.52 | 30 | 100 | |
| 10 | Sulphate as SO ₄ | IS: 3025(part-24) | mg/l | 51.1 | 200 | 400 | |
| 11 | Chloride as Cl | IS: 3025(part-32) | mg/l | 148.9 | 250 | 1000 | |
| 12 | Nitrate as NO ₃ | IS: 3025(part-34) | mg/l | 2.14 | 45 | No Relaxation | |
| 13 | Iron as Fe | IS: 3025(part-34) | mg/l | BDL | 0.3 | No Relaxation | |
| 14 | Fluoride as F | IS: 3025(part-60) | mg/l | 0.40 | 1.0 | 1.5 | |
| 15 | Sodium as Na | IS 3025(part 45):1993 | mg/l | 12.2 | | | |
| 16 | Potassium as K | Is 3025(part 45):1993 | mg/l | 7.6 | | | |

INFERENCE

IS 10500 - 2012 Standards

BDL - Below Detectable Limit

Report Status: - The analyzed values for above measured parameters are within the Permissible

limits.

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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Sanganakallu Road, KEB Circle, Bellary-583103. Contact No: Mob: 94498 03895, (0): 08392-255169,

E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/10317

1. Name of the Industry

,

Name of the sample location
 Sample Collected By

4. Sample Quantity

5. Sample Description/condition6. Date of sample Collection

7. Analysis Starting Date8. Analysis completion Date

9. Sample Tested as Received

Report Issued Date: 22.10.2022

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant) Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

: Bore Well Water at Hanumanhalli Village

: MSV Analytical Laboratories, Bellary

: 2 Liters

: Good/satisfactory : 18.10.2022 : 19.10.2022

22.10.2022

IS 10500-2012 **Parameters** Protocol Unit Result Acceptable Permissible S.No limit limit Chemical parameters IS: 3025(part-42) 0.004 0.05 1.5 17 Copper mg/l IS: 3025(part-59) 0.3 0.002 0.1 18 Manganese mg/l IS:3025(part-0.003 0.001 No Relaxation 19 Mercury mg/l 48)/mercury analyser IS: 3025(part-41) 0.01 0.003 No Relaxation 20 Cadmium mg/l 21 Lead IS: 3025(part-47) mg/l 0.001 0.05 No Relaxation 22 Chromium IS: 3025(part-52) mg/l 0.005 0.05 No Relaxation IS: 3025(part-56) 23 Selenium BDL 0.01 No Relaxation mg/l Zinc IS: 3025(part-49) BDL 5 15 24 mg/l

| INFERENCE | IS 10500 - 2012 Standards |
|-----------|---|
| | BDL - Below Detectable Limit |
| | Report Status: - The analyzed values for above measured parameters are within the |
| | Permissible limits. |

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/10318

Report Issued Date: 22.10.2022

1. Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Sample Type

Bore Well Water at Hanumanhalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Sample Quantity

250 ml (Sterilized Bottle)

5. Sample description/condition

Good/satisfactory 18.10.2022

6. Date of sample Receipt 7. Analysis Starting Date

19.10.2022

8. Analysis Completion Date

22.10.2022

9. Sample tested as Received

RESULTS

| Parameters | Protocol | Unit | Result | IS 10500:2012 Specification |
|----------------------------|--------------|------------|--------|-----------------------------------|
| Total Coliform Bacteria | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |
| Escherichia Coli | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |

IS - 10500 Standards INFERENCE

Report Status: - The above parameters are within limits.

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC720722000019799F

1. Name of the Industry

Report Issued Date: 22.10.2022 M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample location

3. Sample Collected By

Bore Well Water at Munirabad Village
 MSV Analytical Laboratories, Bellary

: 2 Liters

4. Sample Quantity

5. Sample Description/condition6. Date of sample Collection

7. Analysis Starting Date

8. Analysis completion Date
9. Sample Tested as Received

Good/satisfactory

: 18.10.2022 : 19.10.2022

: 22.10.2022

| | | | 70 | | IS 10500-2012 | |
|------|--|-----------------------|-----------|-----------|---------------------|----------------------|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit |
| | | Physical pa | arameters | i | | |
| 1 | Color | IS: 3025(part-4) | | Colorless | 5 | 15 |
| 2 | Odor | IS: 3025(part-5) | | Agreeable | Agreeable | Agreeable |
| 3 | Ph | IS: 3025(part-11) | | 7.38 | 6.5-8.5 | No Relaxation |
| 4 | Turbidity | IS: 3025(part-10) | NTU | 0.44 | 1 | 5 |
| | | Chemical p | arameter | S | | |
| 5 | Alkalinity | IS: 3025(part-23) | mg/l | 162 | 200 | 600 |
| 6 | Total Dissolved Solids | IS: 3025(part-16) | mg/l | 826 | 500 | 2000 |
| 7 | Total Hardness as CaCO ₃ | IS: 3025(part-21) | mg/l | 262.2 | 200 | 600 |
| 8 | Calcium as Ca | IS: 3025(part-40) | mg/l | 47.6 | 75 | 200 |
| 9 | Magnesium as Mg | IS: 3025(part-46) | mg/l | 35.33 | 30 | 100 |
| 10 | Sulphate as SO ₄ | IS: 3025(part-24) | mg/l | 62.8 | 200 | 400 |
| 11 | Chloride as Cl | IS: 3025(part-32) | mg/l | 114.5 | 250 | 1000 |
| 12 | Nitrate as NO ₃ | IS: 3025(part-34) | mg/l | 2.06 | 45 | No Relaxation |
| 13 | Iron as Fe | IS: 3025(part-34) | mg/l | BDL | 0.3 | No Relaxation |
| 14 | Fluoride as F | IS: 3025(part-60) | mg/l | 0.34 | 1.0 | 1.5 |
| 15 | Sodium as Na | IS 3025(part 45):1993 | mg/l | 14.2 | | |
| 16 | Potassium as K | Is 3025(part 45):1993 | mg/l | 7.8 | | |

INFERENCE

IS 10500 - 2012 Standards

BDL - Below Detectable Limit

Report Status: - The analyzed values for above measured parameters are within the Permissible

limits

Verified by

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.

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MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/10321

Name of the Industry

Report Issued Date: 22.10.2022

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample location

Sample Collected By 3.

Sample Quantity 4.

5. Sample Description/condition 6. Date of sample Collection

7. **Analysis Starting Date** 8. **Analysis completion Date**

Sample Tested as Received

Bore Well Water at Munirabad Village MSV Analytical Laboratories, Bellary

2 Liters

Good/satisfactory

18.10.2022

19.10.2022 22.10.2022

| | | | | | IS 10500-2012 | |
|------|------------|---------------------------------------|--------|--------|------------------|----------------------|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit |
| | | Chemical para | meters | | | |
| 17 | Copper | IS: 3025(part-42) | mg/l | 0.003 | 0.05 | 1.5 |
| 18 | Manganese | IS: 3025(part-59) | mg/l | 0.001 | 0.1 | 0.3 |
| 19 | Mercury | IS:3025(part- 48)/mercury analyser | mg/l | 0.004 | 0.001 | No Relaxation |
| 20 | Cadmium | IS: 3025(part-41) | mg/l | 0.005 | 0.01 | No Relaxation |
| 21 | Lead | IS: 3025(part-47) | mg/l | 0.002 | 0.05 | No Relaxation |
| 22 | Chromium | IS: 3025(part-52) | mg/l | 0.003 | 0.05 | No Relaxation |
| 23 | Selenium | IS: 3025(part-56) | mg/l | BDL | 0.01 | No Relaxation |
| 24 | Zinc | IS: 3025(part-49) | mg/l | BDL | 5 | 15 |

| INFERENCE | IS 10500 - 2012 Standards |
|-----------|---|
| | BDL - Below Detectable Limit |
| | Report Status: - The analyzed values for above measured parameters are within the |
| | Permissible limits. |

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/10322

Report Issued Date: 22.10.2022

1. Name of the Industry

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Sample Type

3. Sample Collected By

Bore Well Water at Munirabad Village MSV Analytical Laboratories, Bellary.

4. Sample Quantity

250 ml (Sterilized Bottle)

5. Sample description/condition 6. Date of sample Receipt

Good/satisfactory 18.10.2022

7. Analysis Starting Date

19.10.2022

8. Analysis Completion Date

22.10.2022

9. Sample tested as Received

RESULTS

| Parameters | Protocol | Unit | Result | IS 10500:2012 Specification |
|----------------------------|--------------|-----------|--------|-----------------------------------|
| Total Coliform Bacteria | IS 1622:1981 | MPN/100ml | Absent | Shall not be detectable in 100 ml |
| Escherichia Coli | IS 1622:1981 | MPN/100ml | Absent | Shall not be detectable in 100 ml |

INFERENCE

IS - 10500 Standards

Report Status: - The above parameters are within limits.

Verified by

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only, 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC720722000019793F

Name of the Industry

Report Issued Date: 22.10.2022

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample location

3. Sample Collected By

4. Sample Quantity

5. Sample Description/condition

Date of sample Collection

7. **Analysis Starting Date** 8. **Analysis completion Date**

Sample Tested as Received

Bore Well Water at Vysanakere Village

MSV Analytical Laboratories, Bellary

2 Liters

Good/satisfactory

18.10.2022 :

19.10.2022 22.10.2022

| 94110000 | Ste | | | | IS 10500-2012 | |
|----------|--|-----------------------|-----------|-----------|------------------|----------------------|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit |
| | | Physical p | arameters | 3 | | |
| 1 | Color | IS: 3025(part-4) | | Colorless | 5 | 15 |
| 2 | Odor | IS: 3025(part-5) | | Agreeable | Agreeable | Agreeable |
| 3 | pН | IS: 3025(part-11) | | 7.60 | 6.5-8.5 | No Relaxation |
| 4 | Turbidity | IS: 3025(part-10) | NTU | 0.38 | 1 | 5 |
| | | Chemical p | arameter | S | | |
| 5 | Alkalinity | IS: 3025(part-23) | mg/l | 120 | 200 | 600 |
| 6 | Total Dissolved Solids | IS: 3025(part-16) | mg/l | 646 | 500 | 2000 |
| 7 | Total Hardness as CaCO ₃ | IS: 3025(part-21) | mg/l | 220.4 | 200 | 600 |
| 8 | Calcium as Ca | IS: 3025(part-40) | mg/l | 40.6 | 75 | 200 |
| 9 | Magnesium as Mg | IS: 3025(part-46) | mg/l | 28.98 | 30 | 100 |
| 10 | Sulphate as SO ₄ | IS: 3025(part-24) | mg/l | 32.2 | 200 | 400 |
| 11 | Chloride as Cl | IS: 3025(part-32) | mg/l | 101.4 | 250 | 1000 |
| 12 | Nitrate as NO ₃ | IS: 3025(part-34) | mg/l | 1.14 | 45 | No Relaxation |
| 13 | Iron as Fe | IS: 3025(part-34) | mg/l | BDL | 0.3 | No Relaxation |
| 14 | Fluoride as F | IS: 3025(part-60) | mg/l | 0.30 | 1.0 | 1.5 |
| 15 | Sodium as Na IS 3025(part 45):1993 | | mg/l | 12.2 | | |
| 16 | Potassium as K | Is 3025(part 45):1993 | mg/l | 5.8 | 1222 | |

INFERENCE IS 10500 - 2012 Standards **BDL** - Below Detectable Limit

Report Status: - The analyzed values for above measured parameters are within the Permissible

limits.

Verified by

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.

4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.

5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/10323

Report Issued Date: 22.10.2022

1. Name of the Industry

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample location Bore Well Water at Vysanakere Village

3. Sample Collected By MSV Analytical Laboratories, Bellary 2 Liters

4. Sample Quantity

Good/satisfactory

Sample Description/condition 5. Date of sample Collection 6.

18.10.2022

Analysis Starting Date 7.

19.10.2022

Analysis completion Date 8.

Sample Tested as Received

22.10.2022

| | | | | 1 | IS 10500-2012 | |
|------|------------|---------------------------------------|--------|--------|------------------|----------------------|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit |
| | | Chemical para | meters | | | |
| 17 | Copper | IS: 3025(part-42) | mg/l | 0.005 | 0.05 | 1.5 |
| 18 | Manganese | IS: 3025(part-59) | mg/l | 0.003 | 0.1 | 0.3 |
| 19 | Mercury | IS:3025(part- 48)/mercury analyser | mg/l | 0.002 | 0.001 | No Relaxation |
| 20 | Cadmium | IS: 3025(part-41) | mg/l | 0.002 | 0.01 | No Relaxation |
| 21 | Lead | IS: 3025(part-47) | mg/l | 0.006 | 0.05 | No Relaxation |
| 22 | Chromium | IS: 3025(part-52) | mg/l | 0.004 | 0.05 | No Relaxation |
| 23 | Selenium | IS: 3025(part-56) | mg/l | BDL | 0.01 | No Relaxation |
| 24 | Zinc | IS: 3025(part-49) | mg/l | BDL | 5 | 15 |

| INFERENCE | IS 10500 - 2012 Standards |
|-----------|---|
| | BDL - Below Detectable Limit |
| | Report Status: - The analyzed values for above measured parameters are within the |
| | Permissible limits. |

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/18/03

Report Issued Date: 22.10.2022

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/10324

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Sample Type : Bore Well Water at Vysanakere Village

3. Sample Collected By : MSV Analytical Laboratories, Bellary.

4. Sample Quantity : 250 ml (Sterilized Bottle)

5. Sample description/condition : Good/satisfactory

6. Date of sample Receipt : 18.10.2022 7. Analysis Starting Date : 19.10.2022

8. Analysis Completion Date : 22.10.2022 9. Sample tested as Received

RESULTS

| Parameters | Protocol | Unit | Result | IS 10500:2012 Specification |
|----------------------------|--------------|------------|--------|-----------------------------------|
| Total Coliform Bacteria | IS 1622:1981 | MPN/100ml | Absent | Shall not be detectable in 100 ml |
| Escherichia Coli | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |

| INFERENCE | IS - 10500 Standards |
|-----------|--|
| | Report Status: - The above parameters are within limits. |

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed Smonths from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msvalbellary2018@gmail.com, labmsv@gmail.com, Website: www.msvalbellary.com



ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC720722000019799F

Report Issued Date: 22.10.2022

Name of the Industry 1.

M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the sample location 2.

Bore Well Water at Venkatagiri Village MSV Analytical Laboratories, Bellary

Sample Collected By 3.

2 Liters

Sample Quantity 4.

Good/satisfactory

Sample Description/condition 5. **Date of sample Collection** 6.

18.10.2022

Analysis Starting Date 7.

19.10,2022

Analysis completion Date 8.

22.10.2022

Sample Tested as Received

| | | | | | IS 10500-2012 | | |
|----------|--|-----------------------|----------|------------|---------------------|----------------------|--|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit | |
| | | Physical pa | rameters | | | | |
| 1 | Color | IS: 3025(part-4) | | Colorless | 5 | 15 | |
| 2 | Odor | IS: 3025(part-5) | | Agreeable | Agreeable | Agreeable | |
| 3 | pH | IS: 3025(part-11) | | 7.87 | 6.5-8.5 | No Relaxation | |
| 4 | Turbidity | IS: 3025(part-10) | NTU | 0.41 | 1 | 5 | |
| 4 | Turbluity | Chemical p | arameter | S | | | |
| 5 | Alkalinity | IS: 3025(part-23) | mg/l | 153 | 200 | 600 | |
| 6 | Total Dissolved Solids | IS: 3025(part-16) | mg/l | 783 | 500 | 2000 | |
| 7 | Total Hardness as CaCO ₃ | IS: 3025(part-21) | mg/l | 310.2 | 200 | 600 | |
| 8 | Calcium as Ca | IS: 3025(part-40) | mg/l | 60.6 | 75 | 200 | |
| 9 | Magnesium as Mg | IS: 3025(part-46) | mg/l | 38.2 | 30 | 100 | |
| | Sulphate as SO ₄ | IS: 3025(part-24) | mg/l | 56.4 | 200 | 400 | |
| 10 | Chloride as Cl | IS: 3025(part-32) | mg/l | 164.4 | 250 | 1000 | |
| 11 | 1707.00 TO 100 T | IS: 3025(part-34) | mg/l | 2.40 | 45 | No Relaxation | |
| 12 | Nitrate as NO ₃ | IS: 3025(part-34) | mg/l | BDL(0.004) | 0.3 | No Relaxation | |
| 13 | Iron as Fe | IS: 3025(part-60) | mg/l | 0.44 | 1.0 | 1.5 | |
| 14 15 | 70.000F(+ 4F).1002 | | mg/l | 12.1 | | | |
| 16 | Potassium as K | Is 3025(part 45):1993 | mg/l | 7.4 | | | |

IS 10500 - 2012 Standards INFERENCE

BDL - Below Detectable Limit

Report Status: - The analyzed values for above measured parameters are within the Permissible

limits.



Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,

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5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/10325

Report Issued Date: 22.10.2022

Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the sample location 2.

Bore Well Water at Venkatagiri Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary

Sample Quantity 4.

2 Liters

Sample Description/condition 5.

Good/satisfactory

Date of sample Collection 6. **Analysis Starting Date** 7.

18.10.2022 19.10.2022

Analysis completion Date 8.

22.10.2022

Sample Tested as Received 9.

| | | | | | IS 10500-2012 | |
|------|------------|---------------------------------------|--------|--------|------------------|----------------------|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit |
| | | Chemical para | meters | | | |
| 17 | Copper | IS: 3025(part-42) | mg/l | 0.008 | 0.05 | 1.5 |
| 18 | Manganese | IS: 3025(part-59) | | | 0.1 | 0.3 |
| 19 | Mercury | IS:3025(part- 48)/mercury analyser | mg/l | 0.002 | 0.001 | No Relaxation |
| 20 | Cadmium | IS: 3025(part-41) | mg/l | 0.001 | 0.01 | No Relaxation |
| 21 | Lead | IS: 3025(part-47) | mg/l | 0.003 | 0.05 | No Relaxation |
| 22 | Chromium | IS: 3025(part-52) | mg/l | 0.004 | 0.05 | No Relaxation |
| 23 | Selenium | IS: 3025(part-56) | mg/l | BDL | 0.01 | No Relaxation |
| 24 | Zinc | IS: 3025(part-49) | mg/l | BDL | 5 | 15 |

| INFERENCE | IS 10500 - 2012 Standards |
|-----------|---------------------------|
| | |

BDL - Below Detectable Limit

Report Status: - The analyzed values for above measured parameters are within the

Permissible limits.

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/10326

Report Issued Date: 22.10.2022

1. Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Sample Type

: Bore Well Water at Venkatagiri Village

3. Sample Collected By 4. Sample Quantity

MSV Analytical Laboratories, Bellary.

250 ml (Sterilized Bottle) Good/satisfactory

5. Sample description/condition 6. Date of sample Receipt

18.10.2022

7. Analysis Starting Date

19.10.2022

8. Analysis Completion Date

22.10.2022

9. Sample tested as Received

RESULTS

| Parameters | Protocol | Unit | Result | IS 10500:2012 Specification |
|----------------------------|--------------|------------|--------|-----------------------------------|
| Total Coliform Bacteria | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |
| Escherichia Coli | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml |

INFERENCE

IS - 10500 Standards

Report Status: - The above parameters are within limits.

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/10327

Name of the Industry

Report Issued Date: 22.10.2022

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample location

Sample Collected By 3.

Sample Quantity 4.

Sample Description/condition 5.

Date of sample Collection 6. **Analysis Starting Date** 7.

Analysis completion Date 8.

Sample Tested as Received

Bore Well Water at Hosapete

MSV Analytical Laboratories, Bellary

: 2 Liters

: Good/satisfactory

: 18.10.2022 : 19.10.2022

: 22.10.2022

| | | | | | IS 10 | 500-2012 |
|------|--|-----------------------|----------|-----------|------------------|----------------------|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit |
| | | Physical pa | rameters | | 40 | |
| 1 | Color | IS: 3025(part-4) | | Colorless | 5 | 15 |
| 2 | Odor | IS: 3025(part-5) | | Agreeable | Agreeable | Agreeable |
| 3 | pH | IS: 3025(part-11) | | 7.68 | 6.5-8.5 | No Relaxation |
| 4 | Turbidity | IS: 3025(part-10) | NTU | 0.44 | 1 | 5 |
| • | 14.5) | Chemical p | arameter | S | | |
| 5 | Alkalinity | IS: 3025(part-23) | mg/l | 136 | 200 | 600 |
| 6 | Total Dissolved Solids | IS: 3025(part-16) | mg/l | 734 | 500 | 2000 |
| 7 | Total Hardness as CaCO ₃ | IS: 3025(part-21) | mg/l | 306.2 | 200 | 600 |
| 8 | Calcium as Ca | IS: 3025(part-40) | mg/l | 60.7 | 75 | 200 |
| 9 | Magnesium as Mg | IS: 3025(part-46) | mg/l | 37.57 | 30 | 100 |
| 10 | Sulphate as SO ₄ | IS: 3025(part-24) | mg/l | 46.4 | 200 | 400 |
| 11 | Chloride as Cl | IS: 3025(part-32) | mg/l | 132.5 | 250 | 1000 |
| 12 | Nitrate as NO ₃ | IS: 3025(part-34) | mg/l | 2.14 | 45 | No Relaxation |
| 13 | Iron as Fe | IS: 3025(part-34) | mg/l | BDL | 0.3 | No Relaxation |
| 14 | Fluoride as F | IS: 3025(part-60) | mg/l | 0.36 | 1.0 | 1.5 |
| 15 | Sodium as Na | IS 3025(part 45):1993 | mg/l | 8.6 | | |
| 16 | Potassium as K | Is 3025(part 45):1993 | mg/l | 4.6 | | |

INFERENCE

IS 10500 - 2012 Standards

BDL - Below Detectable Limit

Report Status: - The analyzed values for above measured parameters are within the Permissible

limits.

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/10328

Report Issued Date: 22.10.2022

Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the sample location 2.

Bore Well Water at Hosapete

Sample Collected By 3.

MSV Analytical Laboratories, Bellary

Sample Quantity 4.

2 Liters Good/satisfactory

Sample Description/condition 5. Date of sample Collection 6.

18.10.2022

Analysis Starting Date 7.

: 19.10.2022

Analysis completion Date 8.

: 22.10.2022

Sample Tested as Received

| | | | | | IS 10500-2012 | | |
|------|------------|---------------------------------------|--------|--------|------------------|----------------------|--|
| S.No | Parameters | Protocol | Unit | Result | Acceptable limit | Permissible limit | |
| | | Chemical para | meters | | | | |
| 17 | Copper | IS: 3025(part-42) | mg/l | 0.008 | 0.05 | 1.5 | |
| 18 | Manganese | IS: 3025(part-59) | mg/l | 0.008 | 0.1 | 0.3 | |
| 19 | Mercury | IS:3025(part- 48)/mercury analyser | mg/l | 0.005 | 0.001 | No Relaxation | |
| 20 | Cadmium | IS: 3025(part-41) | mg/l | 0.005 | 0.01 | No Relaxation | |
| 21 | Lead | IS: 3025(part-47) | mg/l | 0.003 | 0.05 | No Relaxation | |
| 22 | Chromium | IS: 3025(part-52) | mg/l | 0.006 | 0.05 | No Relaxation | |
| 23 | Selenium | IS: 3025(part-56) | mg/l | BDL | 0.01 | No Relaxation | |
| 24 | Zinc | IS: 3025(part-49) | mg/l | BDL | 5 | 15 | |

INFERENCE

IS 10500 - 2012 Standards

BDL - Below Detectable Limit

Report Status: - The analyzed values for above measured parameters are within the

Permissible limits.

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/10329

Report Issued Date: 22.10.2022

1. Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Sample Type

: Bore Well Water at Hosapete

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Sample Quantity

250 ml (Sterilized Bottle)

5. Sample description/condition

: Good/satisfactory

6. Date of sample Receipt

18.10.2022 : 19.10.2022

7. Analysis Starting Date 8. Analysis Completion Date

9. Sample tested as Received

: 22.10.2022

RESULTS

| Parameters | Protocol | Unit | Result | IS 10500:2012 Specification | |
|----------------------------|--------------|------------|--------|-----------------------------------|--|
| Total Coliform Bacteria | IS 1622:1981 | MPN/100ml | Absent | Shall not be detectable in 100 ml | |
| Escherichia Coli | IS 1622:1981 | MPN/ 100ml | Absent | Shall not be detectable in 100 ml | |

INFERENCE

IS - 10500 Standards

Report Status: - The above parameters are within limits.

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/10330

Name of the Industry

Report Issued Date: 22.10.2022

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the sample location 2.

Sample Collected By 3.

Sample Quantity 4.

Sample Description/condition 5.

Date of sample Collection 6. 7. **Analysis Starting Date**

Analysis completion Date 8.

Sample Tested as Received

Bore Well Water at Ramgad Reservoir

MSV Analytical Laboratories, Bellary

2 Liters

Good/satisfactory

18.10.2022

: 19.10.2022

: 22.10.2022

| | | | | | IS 10500-2012 | | |
|------|--|---------------------------------|----------|------------|---------------------|----------------------|--|
| S.No | Parameters | Parameters Protocol Unit Result | | Result | Acceptable limit | Permissible limit | |
| | | Physical pa | rameters | S | | | |
| 1 | Color | IS: 3025(part-4) | | Colorless | 5 | 15 | |
| 2 | Odor | IS: 3025(part-5) | | Agreeable | Agreeable | Agreeable | |
| 3 | рН | IS: 3025(part-11) | 1 | 7.82 | 6.5-8.5 | No Relaxation | |
| 4 | Turbidity | IS: 3025(part-10) | NTU | 0.40 | 1 | 5 | |
| | 1 | Chemical p | arameter | 'S | | | |
| 5 | Alkalinity | IS: 3025(part-23) | mg/l | 146 | 200 | 600 | |
| 6 | Total Dissolved Solids | IS: 3025(part-16) | mg/l | 948 | 500 | 2000 | |
| 7 | Total Hardness as CaCO ₃ | IS: 3025(part-21) | mg/l | 312.5 | 200 | 600 | |
| 8 | Calcium as Ca | IS: 3025(part-40) | mg/l | 64.4 | 75 | 200 | |
| 9 | Magnesium as Mg | IS: 3025(part-46) | mg/l | 36.81 | 30 | 100 | |
| 10 | Sulphate as SO ₄ | IS: 3025(part-24) | mg/l | 52.2 | 200 | 400 | |
| 11 | Chloride as Cl | IS: 3025(part-32) | mg/l | 136.9 | 250 | 1000 | |
| 12 | Nitrate as NO ₃ | IS: 3025(part-34) | mg/l | 2.04 | 45 | No Relaxation | |
| 13 | Iron as Fe | IS: 3025(part-34) | mg/l | BDL(0.004) | 0.3 | No Relaxation | |
| 14 | Fluoride as F | IS: 3025(part-60) | mg/l | 0.44 | 1.0 | 1.5 | |
| 15 | Sodium as Na | IS 3025(part 45):1993 | mg/l | 13.3 | 222 | | |
| 16 | Potassium as K | Is 3025(part 45):1993 | mg/l | 6.8 | (244) | | |

IS 10500 - 2012 Standards INFERENCE

BDL - Below Detectable Limit

Report Status: - The analyzed values for above measured parameters are within the Permissible

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue, 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/10331

Report Issued Date: 22.10.2022

1. Name of the Industry

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample location

: Bore Well Water at Ramgad Reservoir

3. Sample Collected By

: MSV Analytical Laboratories, Bellary

4. Sample Quantity

: 2 Liters

5. Sample Description/condition

: Good/satisfactory

6. Date of sample Collection7. Analysis Starting Date

: 18.10.2022

8. Analysis completion Date

: 19.10.2022

9. Sample Tested as Received

: 22.10.2022

| | | | | | IS 10500-2012 | | |
|-------------|-------------------------|---------------------------------------|--------|--------|------------------|----------------------|--|
| S.Ne | .No Parameters Protocol | | Unit | Result | Acceptable limit | Permissible limit | |
| 11 10 10 10 | | Chemical para | meters | - | | | |
| 17 | Copper | IS: 3025(part-42) | mg/l | 0.004 | 0.05 | 1.5 | |
| 18 | Manganese | IS: 3025(part-59) | mg/l | 0.002 | 0.1 | 0.3 | |
| 19 | Mercury | IS:3025(part- 48)/mercury analyser | mg/l | 0.003 | 0.001 | No Relaxation | |
| 20 | Cadmium | IS: 3025(part-41) | mg/l | 0.003 | 0.01 | No Relaxation | |
| 21 | Lead | IS: 3025(part-47) | mg/l | 0.001 | 0.05 | No Relaxation | |
| 22 | Chromium | IS: 3025(part-52) | mg/l | 0.005 | 0.05 | No Relaxation | |
| 23 | Selenium | IS: 3025(part-56) | mg/l | BDL | 0.01 | No Relaxation | |
| 24 | Zinc | IS: 3025(part-49) | mg/l | BDL | 5 | 15 | |

| INFERENCE | IS 10500 - 2012 Standards |
|-----------|---|
| | BDL - Below Detectable Limit |
| | Report Status: - The analyzed values for above measured parameters are within the |
| | Permissible limits. |

Verified by

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No: MSVAL/2022/10277

Report Issued Date: 21.10.2022

1. Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk,

Bellary District, Karnataka.

2. Sample Collected By

: MSV Analytical Laboratories, Bellary.

Name of the Location
 Particulars of the sample collected

Near ARC FurnaceSample collected with High Volume Sampler

5. Date of Sample Receipt

: 15.10.2022

6. Analysis Starting Date7. Analysis Completion Date

: 18.10.2022

8. Sample Tested as Received

: 21.10.2022

| S.No | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Standards Max Limit |
|-------|---------------------------------------|----------------------------|--------------------|-------|-------|---------|----------------|------------------------|
| Direc | - | | 1 | 2 | 3 | | B. | GSR277 (E) |
| 1 | Suspended Particulate Matter | IS-5182(Part-4) -2017 | 792.1 | 787.2 | 780.5 | μg / m³ | 786.6 | 3000 |
| 2 | Sulphur Dioxide as SO ₂ | CPCB Procedure | 17.4 | 20.12 | 24.46 | μg / m³ | 20.7 | 150 |
| 3 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 25.49 | 26.9 | 28.10 | μg / m³ | 26.8 | 120 |
| 4 | Lead as Pb | IS-5182 (Part22) – 2004 | 0.71 | 0.025 | 0.022 | μg / m³ | 0.03 | 2 |
| 5 | Carbon Monoxide as | MSVAL/SOP/A/ 007 | 554 | 576 | 581 | μg / m³ | 570.3 | 5000 |

INFERENCE Standards as per GSR277 (E)
Report Status: - The analyzed values for above measured parameter are within the limits.

Verified by

Authorized Signature

END OF REPORT:

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue, 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No: MSVAL/2022/10276

Report Issued Date: 21.10.2022

1. Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk,

Bellary District, Karnataka.

2. Sample Collected By

: MSV Analytical Laboratories, Bellary.

3. Name of the Location

: Near Power Plant

4. Particulars of the sample collected

: Sample collected with High Volume Sampler

5. Date of Sample Receipt

: 15.10.2022

6. Analysis Starting Date

: 18.10.2022

7. Analysis Completion Date

: 21.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Standards Max Limit |
|------|---------------------------------------|----------------------------|--------------------|-------|-------|---------|-------------------|------------------------|
| | | | 1 | 2 | 3 | | III Avg. | GSR277 (E) |
| 1 | Suspended Particulate Matter | IS-5182(Part-4) -2017 | 585.8 | 580.8 | 573.6 | μg / m³ | 580.1 | 3000 |
| 2 | Sulphur Dioxide as SO ₂ | CPCB Procedure | 22.39 | 24.13 | 17.77 | μg / m³ | 21.4 | 150 |
| 3 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 24.29 | 20.99 | 23.14 | μg / m³ | 22.8 | 120 |
| 4 | Lead as Pb | IS-5182 (Part22) – 2004 | 0.035 | 0.034 | 0.036 | μg / m³ | 0.02 | 2 |
| 5 | Carbon Monoxide as | MSVAL/SOP/A/ 007 | 545 | 543.4 | 546.2 | μg / m³ | 544.9 | 5000 |

INFERENCE Standards as per GSR277 (E)

Report Status: - The analyzed values for above measured parameter are within the limits.

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling Is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No: MSVAL/2022/10277

Report Issued Date: 21.10.2022

1. Name of the Industry

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk,

Bellary District, Karnataka.

2. Sample Collected By

MSV Analytical Laboratories, Bellary.

3. Name of the Location

: Near Coal Shed Area

4. Particulars of the sample collected

Sample collected with High Volume Sampler

5. Date of Sample Receipt

: 15.10.2022

6. Analysis Starting Date7. Analysis Completion Date

: 18.10.2022 : 21.10.2022

8. Sample Tested as Received

; 21.1

| S.No | Parameter | Shift wise results Protocols | | | Units | Units Result in Avg. | Standards Max Limit | |
|------|---------------------------------------|------------------------------|-------|-------|-------|----------------------|------------------------|------------|
| | | | 1 | 2 | 3 | | g. | GSR277 (E) |
| 1 | Suspended Particulate Matter | IS-5182(Part-4) -2017 | 861.9 | 856.9 | 851.9 | μg / m³ | 856.9 | 3000 |
| 2 | Sulphur Dioxide as SO ₂ | CPCB Procedure | 18.64 | 14.85 | 18.97 | μg / m³ | 17.5 | 150 |
| 3 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 27.0 | 22.33 | 24.18 | μg / m³ | 24.5 | 120 |
| 4 | Lead as Pb | IS-5182 (Part22) – 2004 | 0.031 | 0.035 | 0.038 | μg / m³ | 0.02 | 2 |
| 5 | Carbon Monoxide as | MSVAL/SOP/A/ 007 | 382.1 | 385 | 381.1 | μg / m³ | 382.7 | 5000 |

| INFERENCE | Standards as per GSR277 (E) |
|-----------|--|
| INFERENCE | Standards as per disk2 // (L) |
| | Report Status: - The analyzed values for above measured parameter are within the limits. |
| | Report Status: The unary Dea various 101 and 1-1 |

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No: MSVAL/2022/10273

M/s. The Sandur Manganese & Iron Ores Ltd.

Report Issued Date: 21.10.2022

1. Name of the Industry

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk,

Bellary District, Karnataka.

2. Sample Collected By

MSV Analytical Laboratories, Bellary.

3. Name of the Location

: Near Coke Oven Plant

4. Particulars of the sample collected

Sample collected with High Volume Sampler 15.10.2022

5. Date of Sample Receipt6. Analysis Starting Date

: 18.10.2022

7. Analysis Completion Date

: 21.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Standards Max Limit |
|------|---------------------------------------|----------------------------|--------------------|-------|-------|---------------------|-------------------|------------------------|
| | | | 1 | 2 | 3 | | 8. | GSR277 (E) |
| 1 | Suspended Particulate Matter | IS-5182(Part-4) -2017 | 665.3 | 660.2 | 655.9 | μg / m ³ | 660.5 | 3000 |
| 2 | Sulphur Dioxide as SO ₂ | CPCB Procedure | 11.72 | 12.77 | 8.93 | μg / m³ | 11.1 | 150 |
| 3 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 15.90 | 12.9 | 14.0 | μg / m ³ | 14.3 | 120 |
| 4 | Lead as Pb | IS-5182 (Part22) – 2004 | 0.025 | 0.030 | 0.022 | μg / m³ | 0.02 | 2 |
| 5 | Carbon Monoxide as | MSVAL/SOP/A/ 007 | 515 | 524 | 512 | μg / m³ | 517.0 | 5000 |

INFERENCE Standards as per GSR277 (E)
Report Status: - The analyzed values for above measured parameter are within the limits.

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



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MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No: MSVAL/2022/10275

Report Issued Date: 21.10.2022

1. Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk,

Bellary District, Karnataka.

2. Sample Collected By

: MSV Analytical Laboratories, Bellary.

3. Name of the Location

: Near Main Gate

4. Particulars of the sample collected

Sample collected with High Volume Sampler

5. Date of Sample Receipt

: 15.10.2022

6. Analysis Starting Date

: 18.10.2022

7. Analysis Completion Date

21.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Standards Max Limit |
|------|---------------------------------------|----------------------------|--------------------|-------|-------|---------------------|-------------------|------------------------|
| | | | 1 | 2 | 3 | | *** *** 6. | GSR277 (E) |
| 1 | Suspended Particulate Matter | IS-5182(Part-4) -2017 | 375.6 | 370.6 | 365.5 | μg / m³ | 370.6 | 3000 |
| 2 | Sulphur Dioxide as SO ₂ | CPCB Procedure | 13.12 | 15.43 | 8.93 | μg / m³ | 12.5 | 150 |
| 3 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 14.65 | 13.8 | 14.50 | μg / m ³ | 14.3 | 120 |
| 4 | Lead as Pb | IS-5182 (Part22) - 2004 | 0.025 | 0.019 | 0.018 | μg / m³ | 0.02 | 2 |
| 5 | Carbon Monoxide as | MSVAL/SOP/A/ 007 | 645 | 642 | 639 | μg / m³ | 642.0 | 5000 |

INFERENCE Standards as per GSR277 (E)
Report Status: - The analyzed values for above measured parameter are within the limits.

OR REPORT:-

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.



(Certified by ISO 14001-2004, OHSAS18001-2007, ISO 9001-2008)

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MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No: MSVAL/2022/10274

Report Issued Date: 21.10.2022

1. Name of the Industry

: M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk,

Bellary District, Karnataka.

2. Sample Collected By

: MSV Analytical Laboratories, Bellary.

3. Name of the Location

Near iron Ore Beneficiation Plant
 Sample collected with High Volume Sampler

4. Particulars of the sample collected5. Date of Sample Receipt

: 15.10.2022

6. Analysis Starting Date

: 18.10.2022

7. Analysis Completion Date

21.10.2022

8. Sample Tested as Received

| S.No | Parameter | Protocols | Shift wise results | | | Units | Result in Avg. | Standards Max Limit |
|------|---------------------------------------|----------------------------|--------------------|-------|-------|---------------------|-------------------|------------------------|
| | TA. | | 1 | 2 | 3 | d | | GSR277 (E) |
| 1 | Suspended Particulate Matter | IS-5182(Part-4) -2017 | 775.5 | 770.6 | 768.6 | μg / m ³ | 771.6 | 3000 |
| 2 | Sulphur Dioxide as SO ₂ | CPCB Procedure | 7.92 | 7.5 | 7.31 | μg / m³ | 7.6 | 150 |
| 3 | Oxides of Nitrogen as | IS-5182(Part-6) - 2006 | 11.24 | 8.23 | 8.50 | μg / m ³ | 9.3 | 120 |
| 4 | Lead as Pb | IS-5182 (Part22) – 2004 | 0.025 | 0.024 | 0.029 | μg / m ³ | 0.02 | 2 |
| 5 | Carbon Monoxide as | MSVAL/SOP/A/ 007 | 435 | 446 | 449 | μg/m³ | 443.3 | 5000 |

| INFERENCE | Standards as per GSR277 (E) Report Status: - The analyzed values for above measured parameter are within the limits. |
|-----------|--|
| | Report Status: - The analyzed values for above measured parameter are managed |

Verified by

Authorized Signature

1. The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4.Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only. 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an * are not accredited by NABL.