

# *The Sandur Manganese & Iron Ores Limited*

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

## REGISTERED OFFICE

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



## CORPORATE OFFICE

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

Ref No: SMIORE/PLANT/ENV/MR/2023-24/66

5<sup>th</sup> May 2023

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

**Subject:** Submission of monthly monitoring report for the month of April-2023.

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


Dear Sir,

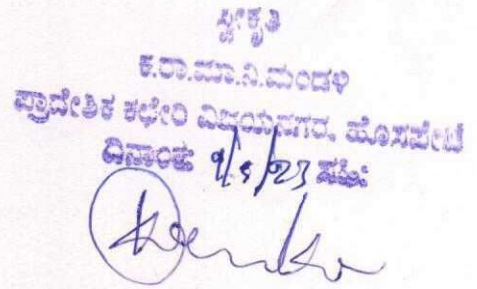
With reference to the above subject, here with we are submitting the environmental monitoring report of our plant for the month of April-2023 for your kind information.

Kindly acknowledge receipt of the same.

Thanking you,

The Sandur Manganese & Iron Ores Limited,

  
Authorized Signatory

  
Official Stamp: 5/5/23  
Signature: [Handwritten]

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

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



# MSV Analytical Laboratories

(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 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Bellary - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5718

Issue Date: 06.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 03.04.2023
6. Date of Sample Receipt : 04.04.2023
7. Sample Code : 6401
8. Analysis Starting Date : 04.04.2023
9. Analysis Completion Date : 06.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	56.2	55.8	54.6	µg / m <sup>3</sup>	55.5	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	18.4	17.6	16.8	µg / m <sup>3</sup>	17.6	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	10.0	9.2	8.6	µg / m <sup>3</sup>	9.3	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	14.2	13.3	12.4	µg / m <sup>3</sup>	13.3	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.7	8.5	8.4	µg / m <sup>3</sup>	8.5	100
6	Lead	IS-5182(Part22)	0.022	0.020	0.019	µg / m <sup>3</sup>	0.020	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.37	0.35	0.34	mg / m <sup>3</sup>	0.35	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.27	1.26	1.25	µg / m <sup>3</sup>	1.26	20

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



Authorized Signatory  
  
B.Chinna Lingana Gouda  
Chief executive of the laboratory

:- END OF REPORT :-

Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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 asterisk are not accredited by NABL.





# MSV Analytical Laboratories

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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5718

Issue Date: 06.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 03.04.2023
6. Date of Sample Receipt : 04.04.2023
7. Sample Code : 6401
8. Analysis Starting Date : 04.04.2023
9. Analysis Completion Date : 06.04.2023
10. Sample Tested as Received

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

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



Authorized Signatory  
  
B.Chinna Lingana Gouda  
Chief executive of the laboratory

---END OF REPORT---

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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5719

Issue Date: 06.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 03.04.2023
6. Date of Sample Receipt : 04.04.2023
7. Sample Code : 6402
8. Analysis Starting Date : 04.04.2023
9. Analysis Completion Date : 06.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	52.8	51.7	50.4	µg / m <sup>3</sup>	51.6	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	15.2	14.6	13.7	µg / m <sup>3</sup>	14.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.7	7.3	6.7	µg / m <sup>3</sup>	7.2	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	14.9	14.2	12.6	µg / m <sup>3</sup>	13.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.8	8.6	8.4	µg / m <sup>3</sup>	8.6	100
6	Lead	IS-5182(Part22)	0.025	0.023	0.027	µg / m <sup>3</sup>	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.48	0.46	0.44	mg / m <sup>3</sup>	0.46	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.34	1.32	µg / m <sup>3</sup>	1.34	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory  
  
B. Chinnna Lingana Gouda  
Chief executive of the laboratory

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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5719

Issue Date: 06.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 03.04.2023
6. Date of Sample Receipt : 04.04.2023
7. Sample Code : 6402
8. Analysis Starting Date : 04.04.2023
9. Analysis Completion Date : 06.04.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5720

Issue Date: 06.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 03.04.2023
6. Date of Sample Receipt : 04.04.2023
7. Sample Code : 6403
8. Analysis Starting Date : 04.04.2023
9. Analysis Completion Date : 06.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.2	52.2	51.4	µg / m <sup>3</sup>	52.6	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	17.2	16.8	15.8	µg / m <sup>3</sup>	16.6	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.8	8.8	7.9	µg / m <sup>3</sup>	8.8	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	13.6	12.4	11.1	µg / m <sup>3</sup>	12.4	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.2	9.0	8.9	µg / m <sup>3</sup>	9.0	100
6	Lead	IS-5182(Part22)	0.025	0.024	0.023	µg / m <sup>3</sup>	0.024	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.34	0.32	0.30	mg / m <sup>3</sup>	0.32	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.24	1.22	1.20	µg / m <sup>3</sup>	1.22	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda

Chief executive of the laboratory

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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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5720

Issue Date: 06.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 03.04.2023
6. Date of Sample Receipt : 04.04.2023
7. Sample Code : 6403
8. Analysis Starting Date : 04.04.2023
9. Analysis Completion Date : 06.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5721

Issue Date: 06.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 03.04.2023
6. Date of Sample Receipt : 04.04.2023
7. Sample Code : 6403
8. Analysis Starting Date : 04.04.2023
9. Analysis Completion Date : 06.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	53.1	54.8	52.4	µg / m <sup>3</sup>	53.4	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	17.4	18.2	16.2	µg / m <sup>3</sup>	17.3	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	5.9	6.7	5.2	µg / m <sup>3</sup>	5.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	14.0	15.6	13.7	µg / m <sup>3</sup>	14.4	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	7.8	8.0	7.4	µg / m <sup>3</sup>	7.7	100
6	Lead	IS-5182(Part22)	0.028	0.030	0.026	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.34	0.36	0.30	mg / m <sup>3</sup>	0.33	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.24	1.26	1.22	µg / m <sup>3</sup>	1.24	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory  
B. Chinna Lingana Gouda  
Chief executive of the laboratory

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





# MSV Analytical Laboratories

(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 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5721

Issue Date: 06.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 03.04.2023
6. Date of Sample Receipt : 04.04.2023
7. Sample Code : 6403
8. Analysis Starting Date : 04.04.2023
9. Analysis Completion Date : 06.04.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

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, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5929

Issue Date: 10.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 06.04.2023
6. Date of Sample Receipt : 07.04.2023
7. Sample Code : 6637
8. Analysis Starting Date : 07.04.2023
9. Analysis Completion Date : 10.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	62.4	60.2	59.4	µg / m <sup>3</sup>	60.7	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	23.6	21.4	20.5	µg / m <sup>3</sup>	21.8	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	12.62	11.00	9.83	µg / m <sup>3</sup>	11.2	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	15.44	14.4	13.15	µg / m <sup>3</sup>	14.3	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.4	10.7	9.2	µg / m <sup>3</sup>	9.8	100
6	Lead	IS-5182(Part22)	0.036	0.034	0.032	µg / m <sup>3</sup>	0.034	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.40	0.41	0.47	mg / m <sup>3</sup>	0.43	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	2.18	2.36	2.45	µg / m <sup>3</sup>	2.33	20

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



Authorized Signatory  
  
B.Chinna Lingana Gouda  
Chief executive of the laboratory

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5929

Issue Date: 10.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 06.04.2023
6. Date of Sample Receipt : 07.04.2023
7. Sample Code : 6637
8. Analysis Starting Date : 07.04.2023
9. Analysis Completion Date : 10.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory

B.Chinnna Lingana Gouda  
Chief executive of the laboratory

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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5930

Issue Date: 10.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 06.04.2023
6. Date of Sample Receipt : 07.04.2023
7. Sample Code : 6638
8. Analysis Starting Date : 07.04.2023
9. Analysis Completion Date : 10.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.4	53.1	52.1	µg / m <sup>3</sup>	53.2	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.6	19.5	18.6	µg / m <sup>3</sup>	19.6	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	12.62	11.23	10.26	µg / m <sup>3</sup>	11.4	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.21	14.94	13.75	µg / m <sup>3</sup>	15.0	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.6	9.4	7.8	µg / m <sup>3</sup>	8.6	100
6	Lead	IS-5182(Part22)	0.038	0.036	0.034	µg / m <sup>3</sup>	0.036	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.30	0.34	0.32	mg / m <sup>3</sup>	0.32	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.15	1.25	2.12	µg / m <sup>3</sup>	1.15	20

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



Authorized Signatory

B. Channa Lingana Gouda  
Chief executive of the laboratory

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5930

Issue Date: 10.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 06.04.2023
6. Date of Sample Receipt : 07.04.2023
7. Sample Code : 6638
8. Analysis Starting Date : 07.04.2023
9. Analysis Completion Date : 10.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory  
  
B. Chinna Lingana Gouda  
Chief executive of the laboratory

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5931

Issue Date: 10.04.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling** : 06.04.2023
- Date of Sample Receipt** : 07.04.2023
- Sample Code** : 6639
- Analysis Starting Date** : 07.04.2023
- Analysis Completion Date** : 10.04.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	49.4	48.3	47.5	µg / m <sup>3</sup>	48.4	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	22.0	24.2	23.4	µg / m <sup>3</sup>	23.2	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	15.41	14.28	15.32	µg / m <sup>3</sup>	15.0	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	17.21	15.06	19.75	µg / m <sup>3</sup>	17.3	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	6.8	7.8	6.2	µg / m <sup>3</sup>	6.9	100
6	Lead	IS-5182(Part22)	0.092	0.090	0.086	µg / m <sup>3</sup>	0.089	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.23	0.27	0.25	mg / m <sup>3</sup>	0.25	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.21	1.23	1.27	µg / m <sup>3</sup>	1.24	20

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

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5931

Issue Date: 10.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 06.04.2023
6. Date of Sample Receipt : 07.04.2023
7. Sample Code : 6639
8. Analysis Starting Date : 07.04.2023
9. Analysis Completion Date : 10.04.2023
10. Sample Tested as Received

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

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

Analysed by



:- END OF REPORT :-

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5932

Issue Date: 10.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 06.04.2023
6. Date of Sample Receipt : 07.04.2023
7. Sample Code : 6640
8. Analysis Starting Date : 07.04.2023
9. Analysis Completion Date : 10.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	56.4	55.4	54.2	µg / m <sup>3</sup>	55.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	21.2	20.4	19.3	µg / m <sup>3</sup>	20.3	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	14.33	12.99	12.19	µg / m <sup>3</sup>	13.2	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	15.96	15.06	13.75	µg / m <sup>3</sup>	14.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.5	8.9	8.4	µg / m <sup>3</sup>	8.9	100
6	Lead	IS-5182(Part22)	0.027	0.023	0.020	µg / m <sup>3</sup>	0.023	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.20	0.22	0.24	mg / m <sup>3</sup>	0.22	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	20

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



Authorized Signatory  
B. Chinna Lingana Gouda  
Chief executive of the laboratory

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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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.





# MSV Analytical Laboratories

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

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5932

Issue Date: 10.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 06.04.2023
6. Date of Sample Receipt : 07.04.2023
7. Sample Code : 6640
8. Analysis Starting Date : 07.04.2023
9. Analysis Completion Date : 10.04.2023
10. Sample Tested as Received

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

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



:- END OF REPORT :-

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6159

Issue Date: 13.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 10.04.2023
6. Date of Sample Receipt : 11.04.2023
7. Sample Code : 6908
8. Analysis Starting Date : 11.04.2023
9. Analysis Completion Date : 13.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	52.4	54.5	50.8	µg / m <sup>3</sup>	52.6	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	23.6	22.4	20.4	µg / m <sup>3</sup>	22.1	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	13.34	11.2	10.0	µg / m <sup>3</sup>	11.5	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	17.72	16.8	14.96	µg / m <sup>3</sup>	16.5	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.7	9.7	7.6	µg / m <sup>3</sup>	8.7	100
6	Lead	IS-5182(Part22)	0.030	0.034	0.032	µg / m <sup>3</sup>	0.032	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.41	0.43	0.46	mg / m <sup>3</sup>	0.43	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.24	1.28	1.22	µg / m <sup>3</sup>	1.25	20

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

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

:- END OF REPORT:-



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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6159

Issue Date: 13.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 10.04.2023
6. Date of Sample Receipt : 11.04.2023
7. Sample Code : 6908
8. Analysis Starting Date : 11.04.2023
9. Analysis Completion Date : 13.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6162

Issue Date: 13.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 10.04.2023
6. Date of Sample Receipt : 11.04.2023
7. Sample Code : 6911
8. Analysis Starting Date : 11.04.2023
9. Analysis Completion Date : 13.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	55.4	54.3	52.6	µg / m <sup>3</sup>	54.1	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.3	19.6	18.7	µg / m <sup>3</sup>	19.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	12.34	11.05	9.93	µg / m <sup>3</sup>	11.1	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	14.30	12.65	12.4	µg / m <sup>3</sup>	13.1	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.4	8.3	9.3	µg / m <sup>3</sup>	9.0	100
6	Lead	IS-5182(Part22)	0.036	0.034	0.032	µg / m <sup>3</sup>	0.034	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.30	0.34	0.38	mg / m <sup>3</sup>	0.34	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.24	1.28	µg / m <sup>3</sup>	1.24	20

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

Analysed by



Authorized Signatory  
B. Chinnna Lingana Gouda  
Chief executive of the laboratory

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6162

Issue Date: 13.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 10.04.2023
6. Date of Sample Receipt : 11.04.2023
7. Sample Code : 6911
8. Analysis Starting Date : 11.04.2023
9. Analysis Completion Date : 13.04.2023
10. Sample Tested as Received

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

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

Analysed by

END OF REPORT:-



Authorized Signatory  
  
B.Chinna Lingana Gouda  
Chief executive of the laboratory

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6160

Issue Date: 13.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 10.04.2023
6. Date of Sample Receipt : 11.04.2023
7. Sample Code : 6909
8. Analysis Starting Date : 11.04.2023
9. Analysis Completion Date : 13.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	60.4	59.3	58.7	µg / m <sup>3</sup>	59.5	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	19.3	18.7	17.6	µg / m <sup>3</sup>	18.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	12.34	11.05	9.93	µg / m <sup>3</sup>	11.1	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	15.15	13.45	12.3	µg / m <sup>3</sup>	13.6	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	7.9	8.9	9.5	µg / m <sup>3</sup>	8.8	100
6	Lead	IS-5182(Part22)	0.054	0.042	0.050	µg / m <sup>3</sup>	0.049	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.22	0.26	0.24	mg / m <sup>3</sup>	0.24	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.26	1.22	1.24	µg / m <sup>3</sup>	1.24	20

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

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6160

Issue Date: 13.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 10.04.2023
6. Date of Sample Receipt : 11.04.2023
7. Sample Code : 6909
8. Analysis Starting Date : 11.04.2023
9. Analysis Completion Date : 13.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory  
  
B. Channa Lingana Gouda  
Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters,  
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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6161

Issue Date: 13.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 10.04.2023
6. Date of Sample Receipt : 11.04.2023
7. Sample Code : 6910
8. Analysis Starting Date : 11.04.2023
9. Analysis Completion Date : 13.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	48.3	47.5	45.4	µg / m <sup>3</sup>	47.1	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	18.6	17.6	16.5	µg / m <sup>3</sup>	17.6	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	13.2	12.45	10.0	µg / m <sup>3</sup>	11.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.6	14.75	14.0	µg / m <sup>3</sup>	15.1	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.7	8.6	7.4	µg / m <sup>3</sup>	8.6	100
6	Lead	IS-5182(Part22)	0.025	0.027	0.020	µg / m <sup>3</sup>	0.024	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.20	0.22	0.25	mg / m <sup>3</sup>	0.22	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.25	1.22	1.26	µg / m <sup>3</sup>	1.24	20

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



Authorized Signatory  
  
B. Chinnna Lingana Gouda  
Chief executive of the laboratory

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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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.





# MSV Analytical Laboratories

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

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6161

Issue Date: 13.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 10.04.2023
6. Date of Sample Receipt : 11.04.2023
7. Sample Code : 6910
8. Analysis Starting Date : 11.04.2023
9. Analysis Completion Date : 13.04.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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.  
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# MSV Analytical Laboratories

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

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6457

Issue Date: 17.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 13.04.2023
6. Date of Sample Receipt : 14.04.2023
7. Sample Code : 6945
8. Analysis Starting Date : 14.04.2023
9. Analysis Completion Date : 17.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	58.9	59.6	57.6	µg / m <sup>3</sup>	58.7	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	22.4	23.4	21.4	µg / m <sup>3</sup>	22.4	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.9	8.1	6.8	µg / m <sup>3</sup>	7.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	17.2	17.8	16.0	µg / m <sup>3</sup>	17.0	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.2	8.1	8.6	µg / m <sup>3</sup>	8.3	100
6	Lead	IS-5182(Part22)	0.036	0.025	0.024	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.41	0.42	0.40	mg / m <sup>3</sup>	0.41	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.8	1.7	1.6	µg / m <sup>3</sup>	1.7	20

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

*Samir*



Authorized Signatory  
*B. Chidana Lingana Gouda*  
B.Chidana Lingana Gouda  
Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters,  
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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6457

Issue Date: 17.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 13.04.2023
6. Date of Sample Receipt : 14.04.2023
7. Sample Code : 6945
8. Analysis Starting Date : 14.04.2023
9. Analysis Completion Date : 17.04.2023
10. Sample Tested as Received

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

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



Authorized Signatory  
*B.Chinna Lingana Gouda*  
B.Chinna Lingana Gouda  
Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters,  
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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6458

Issue Date: 17.04.2023

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 Sampling : 13.04.2023
6. Date of Sample Receipt : 14.04.2023
7. Sample Code : 6946
8. Analysis Starting Date : 14.04.2023
9. Analysis Completion Date : 17.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	56.1	57.8	55.4	µg / m <sup>3</sup>	56.4	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.4	21.4	19.2	µg / m <sup>3</sup>	20.3	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.9	8.9	6.9	µg / m <sup>3</sup>	7.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	12	13.2	10.7	µg / m <sup>3</sup>	12.0	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	7.1	7.0	6.9	µg / m <sup>3</sup>	7.0	100
6	Lead	IS-5182(Part22)	0.032	0.031	0.030	µg / m <sup>3</sup>	0.031	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.32	0.33	0.31	mg / m <sup>3</sup>	0.32	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.81	1.80	1.79	µg / m <sup>3</sup>	1.8	20

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

*Ramul*

Authorized Signatory

*B. Chinnna Lingana Gouda*

Chief executive of the laboratory



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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6458

Issue Date: 17.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 13.04.2023
6. Date of Sample Receipt : 14.04.2023
7. Sample Code : 6946
8. Analysis Starting Date : 14.04.2023
9. Analysis Completion Date : 17.04.2023
10. Sample Tested as Received

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

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

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory



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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6459

Issue Date: 17.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 13.04.2023
6. Date of Sample Receipt : 14.04.2023
7. Sample Code : 6947
8. Analysis Starting Date : 14.04.2023
9. Analysis Completion Date : 17.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	51.6	50.4	49.2	µg / m <sup>3</sup>	50.4	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	16.4	15.8	14.7	µg / m <sup>3</sup>	15.6	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.1	6.9	5.9	µg / m <sup>3</sup>	6.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	12.6	11.9	11.1	µg / m <sup>3</sup>	11.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	3.2	3.1	3.0	µg / m <sup>3</sup>	3.1	100
6	Lead	IS-5182(Part22)	0.088	0.087	0.086	µg / m <sup>3</sup>	0.087	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.25	0.26	0.24	mg / m <sup>3</sup>	0.25	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.16	1.15	1.14	µg / m <sup>3</sup>	1.2	20

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

*Ram*

Authorized Signatory

*B. Chinnna Lingana Gouda*  
B. Chinnna Lingana Gouda  
Chief executive of the laboratory



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.

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6459

Issue Date: 17.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 13.04.2023
6. Date of Sample Receipt : 14.04.2023
7. Sample Code : 6947
8. Analysis Starting Date : 14.04.2023
9. Analysis Completion Date : 17.04.2023
10. Sample Tested as Received

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

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

Authorized Signatory  
*B.Chinna Lingana Gouda*  
B.Chinna Lingana Gouda  
Chief executive of the laboratory



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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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.



# MSV Analytical Laboratories

(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 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6460

Issue Date: 17.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 13.04.2023
6. Date of Sample Receipt : 14.04.2023
7. Sample Code : 6948
8. Analysis Starting Date : 14.04.2023
9. Analysis Completion Date : 17.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.6	53.2	52.4	µg / m <sup>3</sup>	53.4	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	15.2	14.1	13.7	µg / m <sup>3</sup>	14.3	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	5.0	5.1	3.9	µg / m <sup>3</sup>	4.7	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	8.3	6.5	5.9	µg / m <sup>3</sup>	6.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	6.6	6.5	6.4	µg / m <sup>3</sup>	6.5	100
6	Lead	IS-5182(Part22)	0.014	0.013	0.012	µg / m <sup>3</sup>	0.013	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.25	0.23	mg / m <sup>3</sup>	0.24	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.23	1.22	1.21	µg / m <sup>3</sup>	1.2	20

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



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6460

Issue Date: 17.04.2023

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 Sampling : 13.04.2023
6. Date of Sample Receipt : 14.04.2023
7. Sample Code : 6948
8. Analysis Starting Date : 14.04.2023
9. Analysis Completion Date : 17.04.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

B.Chirna Lingana Gouda  
Chief executive of the laboratory



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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

9

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6705

Issue Date: 20.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 17.04.2023
6. Date of Sample Receipt : 18.04.2023
7. Sample Code : 7232
8. Analysis Starting Date : 18.04.2023
9. Analysis Completion Date : 20.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	58.2	59.4	57.3	µg / m <sup>3</sup>	58.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	21.6	22.7	20.8	µg / m <sup>3</sup>	21.7	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	17.4	17.3	16.1	µg / m <sup>3</sup>	16.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	20.9	21.6	20.4	µg / m <sup>3</sup>	21.0	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.4	8.3	8.2	µg / m <sup>3</sup>	8.3	100
6	Lead	IS-5182(Part22)	0.034	0.033	0.032	µg / m <sup>3</sup>	0.033	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	<0.01	<0.01	<0.01	mg / m <sup>3</sup>	<0.01	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.81	1.80	1.79	µg / m <sup>3</sup>	1.80	20

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



Authorized Signatory  
  
B.Chinna Lingana Gouda  
Chief executive of the laboratory

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6705

Issue Date: 20.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 17.04.2023
6. Date of Sample Receipt : 18.04.2023
7. Sample Code : 7232
8. Analysis Starting Date : 18.04.2023
9. Analysis Completion Date : 20.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory  
  
B.Chinna Lingana Gouda  
Chief executive of the laboratory

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6706

Issue Date: 20.04.2023

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 Sampling : 17.04.2023
6. Date of Sample Receipt : 18.04.2023
7. Sample Code : 7233
8. Analysis Starting Date : 18.04.2023
9. Analysis Completion Date : 20.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.6	53.1	52.4	µg / m <sup>3</sup>	53.4	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	17.2	16.2	15.8	µg / m <sup>3</sup>	16.4	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	11.8	10.2	9.9	µg / m <sup>3</sup>	10.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	15.4	14.3	12.6	µg / m <sup>3</sup>	14.1	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.4	8.3	8.2	µg / m <sup>3</sup>	8.3	100
6	Lead	IS-5182(Part22)	1.24	1.23	1.22	µg / m <sup>3</sup>	1.23	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.34	0.35	0.33	mg / m <sup>3</sup>	0.34	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.35	1.34	µg / m <sup>3</sup>	1.35	20

### INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

B. Chirna Lingana Gouda  
Chief executive of the laboratory



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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6706

Issue Date: 20.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 17.04.2023
6. Date of Sample Receipt : 18.04.2023
7. Sample Code : 7233
8. Analysis Starting Date : 18.04.2023
9. Analysis Completion Date : 20.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory

B.Chintha Lingana Gouda  
Chief executive of the laboratory

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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6707

Issue Date: 20.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 17.04.2023
6. Date of Sample Receipt : 18.04.2023
7. Sample Code : 7234
8. Analysis Starting Date : 18.04.2023
9. Analysis Completion Date : 20.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.2	53.1	52.7	µg / m <sup>3</sup>	53.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	16.2	15.8	14.2	µg / m <sup>3</sup>	15.4	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.8	7.8	6.8	µg / m <sup>3</sup>	7.8	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	11.7	10.7	9.5	µg / m <sup>3</sup>	10.6	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.1	8.0	7.9	µg / m <sup>3</sup>	8.0	100
6	Lead	IS-5182(Part22)	0.026	0.025	0.024	µg / m <sup>3</sup>	0.03	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.29	0.27	mg / m <sup>3</sup>	0.28	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.32	1.31	1.30	µg / m <sup>3</sup>	1.31	20

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



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,  
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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6707

Issue Date: 20.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 17.04.2023
6. Date of Sample Receipt : 18.04.2023
7. Sample Code : 7234
8. Analysis Starting Date : 18.04.2023
9. Analysis Completion Date : 20.04.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

END OF REPORT



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.  
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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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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6708

Issue Date: 20.04.2023

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 Sampling : 17.04.2023
6. Date of Sample Receipt : 18.04.2023
7. Sample Code : 7235
8. Analysis Starting Date : 18.04.2023
9. Analysis Completion Date : 20.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	53.2	52.1	51.7	µg / m <sup>3</sup>	52.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	14.6	13.3	12.5	µg / m <sup>3</sup>	13.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.2	8.1	6.7	µg / m <sup>3</sup>	7.7	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	15.6	14.8	14.3	µg / m <sup>3</sup>	14.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	6.4	6.3	6.2	µg / m <sup>3</sup>	6.3	100
6	Lead	IS-5182(Part22)	1.34	1.33	1.32	µg / m <sup>3</sup>	1.33	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.32	0.33	0.31	mg / m <sup>3</sup>	0.32	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.26	1.25	1.24	ng / m <sup>3</sup>	1.25	20

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

Analysed by

Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

:- END OF REPORT:-



Note : 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6708

Issue Date: 20.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 17.04.2023
6. Date of Sample Receipt : 18.04.2023
7. Sample Code : 7235
8. Analysis Starting Date : 18.04.2023
9. Analysis Completion Date : 20.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory  
  
B.Chinna Lingana Gouda  
Chief executive of the laboratory

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6944

Issue Date: 24.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 20.04.2023
6. Date of Sample Receipt : 21.04.2023
7. Sample Code : 7492
8. Analysis Starting Date : 21.04.2023
9. Analysis Completion Date : 24.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	58.9	59.2	57.4	µg / m <sup>3</sup>	58.5	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	21.4	22.6	20.7	µg / m <sup>3</sup>	21.6	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	12.4	10.9	11.0	µg / m <sup>3</sup>	11.4	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.9	19.2	18.6	µg / m <sup>3</sup>	18.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.42	8.41	8.40	µg / m <sup>3</sup>	8.4	100
6	Lead	IS-5182(Part22)	0.025	0.024	0.023	µg / m <sup>3</sup>	0.024	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.38	0.37	0.36	mg / m <sup>3</sup>	0.37	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.50	1.49	1.48	µg / m <sup>3</sup>	1.49	20

### INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory



Page:1

Note : 1. The results listed only to the tested samples & applicable parameters,  
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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6944

Issue Date: 24.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 20.04.2023
6. Date of Sample Receipt : 21.04.2023
7. Sample Code : 7492
8. Analysis Starting Date : 21.04.2023
9. Analysis Completion Date : 24.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory  
  
B.Chirna Lingana Gouda  
Chief executive of the laboratory

Page:2

Note: 1. The results listed only to the tested samples & applicable parameters,  
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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6945

Issue Date: 24.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 20.04.2023
6. Date of Sample Receipt : 21.04.2023
7. Sample Code : 7493
8. Analysis Starting Date : 21.04.2023
9. Analysis Completion Date : 24.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	48.2	49.3	47.6	µg / m <sup>3</sup>	48.4	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	19.6	20.4	18.4	µg / m <sup>3</sup>	19.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	10.0	11.2	9.3	µg / m <sup>3</sup>	10.2	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	13.7	14.8	13.1	µg / m <sup>3</sup>	13.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.40	8.39	8.38	µg / m <sup>3</sup>	8.4	100
6	Lead	IS-5182(Part22)	0.021	0.020	0.019	µg / m <sup>3</sup>	0.020	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.34	0.33	0.32	mg / m <sup>3</sup>	0.33	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.40	1.39	1.38	µg / m <sup>3</sup>	1.39	20

### INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory



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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6945

Issue Date: 24.04.2023

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(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 20.04.2023
6. Date of Sample Receipt : 21.04.2023
7. Sample Code : 7493
8. Analysis Starting Date : 21.04.2023
9. Analysis Completion Date : 24.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory  
  
B.Chinna Lingana Gouda  
Chief executive of the laboratory



# MSV Analytical Laboratories

(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: MSVAL/2023/6946

Issue Date: 24.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 20.04.2023
6. Date of Sample Receipt : 21.04.2023
7. Sample Code : 7494
8. Analysis Starting Date : 21.04.2023
9. Analysis Completion Date : 24.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.9	55.4	53.2	µg / m <sup>3</sup>	54.5	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.2	21.6	19.8	µg / m <sup>3</sup>	20.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	19.0	20.2	18.1	µg / m <sup>3</sup>	19.1	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	22.8	24.0	21.6	µg / m <sup>3</sup>	22.8	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	6.2	6.1	6.0	µg / m <sup>3</sup>	6.1	100
6	Lead	IS-5182(Part22)	0.015	0.014	0.013	µg / m <sup>3</sup>	0.014	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.31	0.30	0.29	mg / m <sup>3</sup>	0.30	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.27	1.26	µg / m <sup>3</sup>	1.27	20

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

B. Chinnna Lingana Gouda  
Chief executive of the laboratory



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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6946

Issue Date: 24.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 20.04.2023
6. Date of Sample Receipt : 21.04.2023
7. Sample Code : 7494
8. Analysis Starting Date : 21.04.2023
9. Analysis Completion Date : 24.04.2023
10. Sample Tested as Received

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

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



Authorized Signatory  
  
B.Chinna Lingana Gouda  
Chief executive of the laboratory

Page:2

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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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6947

Issue Date: 24.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 20.04.2023
6. Date of Sample Receipt : 21.04.2023
7. Sample Code : 7495
8. Analysis Starting Date : 21.04.2023
9. Analysis Completion Date : 24.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	48.7	49.8	47.1	µg / m <sup>3</sup>	48.5	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	18.9	19.4	17.2	µg / m <sup>3</sup>	18.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	12.1	13.2	10.8	µg / m <sup>3</sup>	12.1	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	19.0	19.2	18.0	µg / m <sup>3</sup>	18.7	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.6	9.5	9.4	µg / m <sup>3</sup>	9.5	100
6	Lead	IS-5182(Part22)	0.021	0.020	0.019	µg / m <sup>3</sup>	0.020	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.25	0.24	0.23	mg / m <sup>3</sup>	0.24	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.34	1.33	1.32	µg / m <sup>3</sup>	1.33	20

### INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

END OF REPORT



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

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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/6947

Issue Date: 24.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 20.04.2023
6. Date of Sample Receipt : 21.04.2023
7. Sample Code : 7495
8. Analysis Starting Date : 21.04.2023
9. Analysis Completion Date : 24.04.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory  
  
B.Chintha Lingana Gouda  
Chief executive of the laboratory

Page:2

Note: 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7280

Issue Date: 27.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 24.04.2023
6. Date of Sample Receipt : 25.04.2023
7. Sample Code : 7885
8. Analysis Starting Date : 25.04.2023
9. Analysis Completion Date : 27.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	56.7	59.2	55.6	µg / m <sup>3</sup>	57.2	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.3	22.4	21.6	µg / m <sup>3</sup>	21.4	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	10.8	11.8	9.6	µg / m <sup>3</sup>	10.7	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.3	21.9	19.4	µg / m <sup>3</sup>	19.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	100
6	Lead	IS-5182(Part22)	0.083	0.080	0.082	µg / m <sup>3</sup>	0.082	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.26	0.30	0.34	mg / m <sup>3</sup>	0.30	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.22	1.24	µg / m <sup>3</sup>	1.25	20

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

Analysed by

Authorized Signatory  
Renukamma  
Quality Manager



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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7280

Issue Date: 27.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 24.04.2023
6. Date of Sample Receipt : 25.04.2023
7. Sample Code : 7885
8. Analysis Starting Date : 25.04.2023
9. Analysis Completion Date : 27.04.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager



Note: 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7281

Issue Date: 27.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 24.04.2023
6. Date of Sample Receipt : 25.04.2023
7. Sample Code : 7886
8. Analysis Starting Date : 25.04.2023
9. Analysis Completion Date : 27.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	52.3	54.7	50.7	µg / m <sup>3</sup>	52.6	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	14.4	16.6	15.7	µg / m <sup>3</sup>	15.6	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.9	9.4	6.7	µg / m <sup>3</sup>	8.3	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	15.7	14.8	13.2	µg / m <sup>3</sup>	14.6	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.4	9.9	7.2	µg / m <sup>3</sup>	8.5	100
6	Lead	IS-5182(Part22)	0.031	0.033	0.032	µg / m <sup>3</sup>	0.032	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.21	0.23	0.27	mg / m <sup>3</sup>	0.24	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.10	1.15	1.13	ng / m <sup>3</sup>	1.13	20

### INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Renukamma

Quality Manager

- END OF REPORT -



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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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7281

Issue Date: 27.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 24.04.2023
6. Date of Sample Receipt : 25.04.2023
7. Sample Code : 7886
8. Analysis Starting Date : 25.04.2023
9. Analysis Completion Date : 27.04.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager



Note: 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7282

Issue Date: 27.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 24.04.2023
6. Date of Sample Receipt : 25.04.2023
7. Sample Code : 7887
8. Analysis Starting Date : 25.04.2023
9. Analysis Completion Date : 27.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	50.4	52.8	54.7	µg / m <sup>3</sup>	52.6	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	21.7	20.4	22.3	µg / m <sup>3</sup>	21.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.7	9.9	7.4	µg / m <sup>3</sup>	8.7	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.2	15.7	13.6	µg / m <sup>3</sup>	15.2	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.9	8.7	7.2	µg / m <sup>3</sup>	8.6	100
6	Lead	IS-5182(Part22)	0.022	0.020	0.022	µg / m <sup>3</sup>	0.021	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.22	0.23	0.27	mg / m <sup>3</sup>	0.24	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.26	1.24	1.22	ng / m <sup>3</sup>	1.24	20

### INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager



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.

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





# MSV Analytical Laboratories

(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 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7282

Issue Date: 27.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 24.04.2023
6. Date of Sample Receipt : 25.04.2023
7. Sample Code : 7887
8. Analysis Starting Date : 25.04.2023
9. Analysis Completion Date : 27.04.2023
10. Sample Tested as Received

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

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

Authorized Signatory

Renukamma  
Quality Manager



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, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7283

Issue Date: 27.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 24.04.2023
6. Date of Sample Receipt : 25.04.2023
7. Sample Code : 7888
8. Analysis Starting Date : 25.04.2023
9. Analysis Completion Date : 27.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	52.4	53.8	55.7	µg / m <sup>3</sup>	54.1	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.7	22.4	21.3	µg / m <sup>3</sup>	21.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.8	9.7	7.2	µg / m <sup>3</sup>	8.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	17.2	16.4	14.6	µg / m <sup>3</sup>	16.1	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.4	8.3	7.7	µg / m <sup>3</sup>	8.5	100
6	Lead	IS-5182(Part22)	0.024	0.022	0.020	µg / m <sup>3</sup>	0.022	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.20	0.24	0.26	mg / m <sup>3</sup>	0.23	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.22	1.24	µg / m <sup>3</sup>	1.22	20

### INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Renukamma

Quality Manager

END OF REPORT



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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7283

Issue Date: 27.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 24.04.2023
6. Date of Sample Receipt : 25.04.2023
7. Sample Code : 7888
8. Analysis Starting Date : 25.04.2023
9. Analysis Completion Date : 27.04.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager

:- END OF REPORT:-



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, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7483

Issue Date: 02.05.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 27.04.2023
6. Date of Sample Receipt : 28.04.2023
7. Sample Code : 8117
8. Analysis Starting Date : 28.04.2023
9. Analysis Completion Date : 02.05.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	51.4	52.3	50.2	µg / m <sup>3</sup>	51.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	23.6	24.7	22.4	µg / m <sup>3</sup>	23.6	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.8	9.9	7.9	µg / m <sup>3</sup>	8.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.7	17.9	15.6	µg / m <sup>3</sup>	16.7	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	10.2	10.1	10.0	µg / m <sup>3</sup>	10.1	100
6	Lead	IS-5182(Part22)	0.029	0.028	0.027	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.26	0.28	0.24	mg / m <sup>3</sup>	0.26	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.32	1.31	1.30	µg / m <sup>3</sup>	1.31	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory  
Renukamma  
Quality Manager

Note : 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7483

Issue Date: 02.05.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 27.04.2023
6. Date of Sample Receipt : 28.04.2023
7. Sample Code : 8117
8. Analysis Starting Date : 28.04.2023
9. Analysis Completion Date : 02.05.2023
10. Sample Tested as Received

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

µg

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

Authorized Signatory

Renukamma  
Quality Manager



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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7484

Issue Date: 02.05.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, 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 Sampling : 27.04.2023
6. Date of Sample Receipt : 28.04.2023
7. Sample Code : 8119
8. Analysis Starting Date : 28.04.2023
9. Analysis Completion Date : 02.05.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	52.1	53.2	51.2	µg / m <sup>3</sup>	52.2	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	16.3	17.4	15.4	µg / m <sup>3</sup>	16.4	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.2	8.7	6.7	µg / m <sup>3</sup>	7.5	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.8	16.1	16.0	µg / m <sup>3</sup>	16.3	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	7.6	7.5	7.4	µg / m <sup>3</sup>	7.5	100
6	Lead	IS-5182(Part22)	0.024	0.023	0.022	µg / m <sup>3</sup>	0.023	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.32	0.33	0.31	mg / m <sup>3</sup>	0.32	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.26	1.25	1.24	µg / m <sup>3</sup>	1.25	20

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

Analysed by



Authorized Signatory

Renukamma  
Quality Manager

Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7484

Issue Date: 02.05.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 27.04.2023
6. Date of Sample Receipt : 28.04.2023
7. Sample Code : 8119
8. Analysis Starting Date : 28.04.2023
9. Analysis Completion Date : 02.05.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager

:- END OF REPORT:-



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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7485

Issue Date: 02.05.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 27.04.2023
6. Date of Sample Receipt : 28.04.2023
7. Sample Code : 8120
8. Analysis Starting Date : 28.04.2023
9. Analysis Completion Date : 02.05.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	58.2	59.3	57.3	µg / m <sup>3</sup>	58.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	22.6	23.7	21.2	µg / m <sup>3</sup>	22.5	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	6.6	7.0	5.8	µg / m <sup>3</sup>	6.5	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	15.4	16	13.7	µg / m <sup>3</sup>	15.0	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.4	8.3	8.1	µg / m <sup>3</sup>	8.3	100
6	Lead	IS-5182(Part22)	0.024	0.022	0.021	µg / m <sup>3</sup>	0.022	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.23	0.24	0.22	mg / m <sup>3</sup>	0.23	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.34	1.32	µg / m <sup>3</sup>	1.34	20

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

Analysed by



Authorized Signatory  
Renukamma  
Quality Manager

Note : 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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.





# MSV Analytical Laboratories

(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 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7485

Issue Date: 02.05.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 27.04.2023
6. Date of Sample Receipt : 28.04.2023
7. Sample Code : 8120
8. Analysis Starting Date : 28.04.2023
9. Analysis Completion Date : 02.05.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager

:- END OF REPORT:-



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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/7486

Issue Date: 02.05.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 Sampling : 27.04.2023
6. Date of Sample Receipt : 28.04.2023
7. Sample Code : 8121
8. Analysis Starting Date : 28.04.2023
9. Analysis Completion Date : 02.05.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	56.3	55.2	54.3	µg / m <sup>3</sup>	55.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.4	19.1	18.2	µg / m <sup>3</sup>	19.2	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.1	6.9	5.9	µg / m <sup>3</sup>	6.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	14.2	13	11.9	µg / m <sup>3</sup>	13.1	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	100
6	Lead	IS-5182(Part22)	7.1	7.0	6.9	µg / m <sup>3</sup>	7.1	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.21	0.22	0.20	mg / m <sup>3</sup>	0.21	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.31	1.30	1.29	µg / m <sup>3</sup>	1.20	20

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager

:- END OF REPORT :-



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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/ 7486

Issue Date: 02.05.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling : 27.04.2023
6. Date of Sample Receipt : 28.04.2023
7. Sample Code : 8121
8. Analysis Starting Date : 28.04.2023
9. Analysis Completion Date : 02.05.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager

:- END OF REPORT:-



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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/7293

Report Issued Date : 27.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Screening & Store
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 24.04.2023
6. Sample Code : 7902
7. Analysis Starting Date : 25.04.2023
8. Analysis Completion Date : 27.04.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	24.04.2023
Fuel Used	---
Stack Temperature (°C)	36
Velocity (m/s)	6.0
Height (m)	15mtrs AGL
Diameter (m)	0.7
Cross sectional area (m <sup>2</sup> )	0.38465

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	20.4	50

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

Authorised Signatory

Renukamma

Quality Manager



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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/7292

Report Issued Date: 27.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Cutter
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 24.04.2023
6. Sample Code : 7901
7. Analysis Starting Date : 25.04.2023
8. Analysis Completion Date : 27.04.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	24.04.2023
Fuel Used	---
Stack Temperature (°C)	40
Velocity (m/s)	3.1
Height (m)	15mtrs AGL
Diameter (m)	0.7
Cross sectional area (m <sup>2</sup> )	0.38465

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	24.2	50

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

Analysed by

Authorised Signatory

Renukamma

Quality Manager

:- END OF REPORT:-



Note: 1. The results listed only to the tested samples & applicable parameters,  
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MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/7099

Report Issued Date : 24.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coal Crushing Area
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 21.04.2023
6. Sample Code : 7522
7. Analysis Starting Date : 22.04.2023
8. Analysis Completion Date : 24.04.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	21.04.2023
Fuel Used	---
Stack Temperature (°C)	37
Velocity (m/s)	6.2
Height (m)	15mtrs AGL
Diameter (m)	0.75
Cross sectional area (m <sup>2</sup> )	0.44156

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	27.2	50

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

Analysed by

Authorised Signatory

Renukamma

Quality Manager



:-

Note: 1. The results listed only to the tested samples & applicable parameters,  
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MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/6967

Report Issued Date: 24.04.2023

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 5
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 20.04.2023
6. Sample Code : 7521
7. Analysis Starting Date : 21.04.2023
8. Analysis Completion Date : 24.04.2023
9. Sample Tested as Received

### GENERAL DETAILS

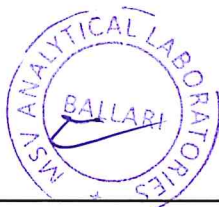
Date of Monitoring	20.04.2023
Fuel Used	----
Stack Temperature (°C)	96
Velocity (m/s)	7.6
Height (m)	35 mtrs AGL
Diameter (m)	2.5
Cross sectional area (m <sup>2</sup> )	4.90625
Flow/Discharge Rate of Gas Nm <sup>3</sup> /Hr	120811.5

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	30.8	150
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm <sup>3</sup>	24.2	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm <sup>3</sup>	39.2	500
Carbon Monoxide as(CO)	IS 13270	%	0.33	Max 1%
Oxygen as O <sub>2</sub>	Instrument Method	%	5.1	---

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

Analysed by



Authorised Signatory

Renukamma

Quality Manager

Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be 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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No:

Report Issued Date: 24.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Ferro Alloy Arc Furnace 3
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt :
6. Sample Code :
7. Analysis Starting Date :
8. Analysis Completion Date :
9. Sample Tested as Received :

### GENERAL DETAILS

Date of Monitoring	
Fuel Used	----
Stack Temperature (°C)	
Velocity (m/s)	
Height (m)	35 mtrs AGL
Diameter (m)	2.5
Cross sectional area (m <sup>2</sup> )	4.90625
Flow/Discharge Rate of Gas Nm <sup>3</sup> /Hr	

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	Shut down	150
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm <sup>3</sup>		800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm <sup>3</sup>		500
Carbon Monoxide as(CO)	IS 13270	%		Max 1%
Oxygen as O <sub>2</sub>	Instrument Method	%		---

### INFERENCE

As per GSR 277 (E) Standards.

Report Status :- The analyzed value for above measured parameter is within the limits.

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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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 EMISSION

Test Report No: MSVAL/2023/6747

Report Issued Date : 20.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Oven Battery - Passes Through WHRB-1
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 17.04.2023
6. Sample Code : 7237
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 20.04.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	17.04.2023
Fuel Used	----
Stack Temperature (°C)	145
Velocity (m/s)	7.4
Height (m)	60 mtrs AGL
Diameter (m)	4.6
Cross sectional area (m <sup>2</sup> )	16.61
Flow/Discharge Rate of Gas Nm <sup>3</sup> /Hr	275061.6

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	24.3	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm <sup>3</sup>	21.2	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm <sup>3</sup>	56.4	500
Carbon Monoxide as(CO)	IS 13270	%	0.24	Max 1%
Oxygen as O <sub>2</sub>	Instrument Method	%	5.1	---

### INFERENCE

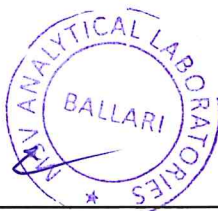
As per GSR 277 (E) Standards.  
Report Status :- The analyzed value for above measured parameter is  
within the limits.

Analysed by

Authorised Signatory

Renukamma

Quality Manager



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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/6748

Report Issued Date : 20.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Oven Battery - Passes Through WHRB-2
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 17.04.2023
6. Sample Code : 7238
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 20.04.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	17.04.2023
Fuel Used	----
Stack Temperature (°C)	139
Velocity (m/s)	7.3
Height (m)	60 mtrs AGL
Diameter (m)	4.6
Cross sectional area (m <sup>2</sup> )	16.61
Flow/Discharge Rate of Gas Nm <sup>3</sup> /Hr	425747.52

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	21.3	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm <sup>3</sup>	30.2	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm <sup>3</sup>	53.2	500
Carbon Monoxide as(CO)	IS 13270	%	0.26	Max 1%
Oxygen as O <sub>2</sub>	Instrument Method	%	5.1	---

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

Authorised Signatory

Renukamma

Quality Manager



Note: 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2023/6396

Report Issued Date : 17.04.2023

1.	Name of the Industry	:	M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant) Vysanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
2.	Sample Collected By	:	MSV Analytical Laboratories, Bellary.
3.	Name of the Location	:	Near ARC Furnace
4.	Particulars of the sample collected	:	Sample collected with High Volume Sampler
5.	Date of Sample Receipt	:	12.04.2023
6.	Sample Code	:	6920
7.	Analysis Starting Date	:	13.04.2023
8.	Analysis Completion Date	:	17.04.2023
9.	Sample Tested as Received	:	

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	758.2	753.2	748.2	µg / m <sup>3</sup>	753.2	3000
2	Sulphur Dioxide as SO <sub>2</sub>	CPCB Procedure	14.6	12.3	13.7	µg / m <sup>3</sup>	13.5	150
3	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	17.8	16.2	13.7	µg / m <sup>3</sup>	15.9	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.046	0.045	0.037	µg / m <sup>3</sup>	0.043	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	540.2	532.1	510.7	µg / m <sup>3</sup>	527.7	5000

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

Analysed by

Authorised Signatory

Renukamma

Quality Manager



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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2023/6397

Report Issued Date : 17.04.2023

1.	Name of the Industry	:	M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant) Vyasnakere, 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	:	12.04.2023
6.	Sample Code	:	6929
7.	Analysis Starting Date	:	13.04.2023
8.	Analysis Completion Date	:	17.04.2023
9.	Sample Tested as Received		

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	570.2	565.2	560.2	µg / m <sup>3</sup>	565.2	3000
2	Sulphur Dioxide as SO <sub>2</sub>	CPCB Procedure	12.9	11.1	10.7	µg / m <sup>3</sup>	11.6	150
3	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	17.6	16.4	12.8	µg / m <sup>3</sup>	15.6	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.040	0.036	0.041	µg / m <sup>3</sup>	0.039	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	524.3	506.7	521.2	µg / m <sup>3</sup>	517.4	5000

### INFERENCE

Standards as per GSR277 (E)

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

Analysed by



Authorised Signatory

Renukamma

Quality Manager

END OF REPORT:-

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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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/16/03

## ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2023/ 6398

Report Issued Date : 17.04.2023

1.	Name of the Industry	:	M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant) Vyasnakere, 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	:	12.04.2023
6.	Sample Code	:	6931
7.	Analysis Starting Date	:	13.04.2023
8.	Analysis Completion Date	:	17.04.2023
9.	Sample Tested as Received	:	

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	852.6	847.6	842.6	µg / m <sup>3</sup>	847.6	3000
2	Sulphur Dioxide as SO <sub>2</sub>	CPCB Procedure	14.3	12.4	11.1	µg / m <sup>3</sup>	12.6	150
3	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	17.6	16.8	15.6	µg / m <sup>3</sup>	16.7	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.051	0.053	0.050	µg / m <sup>3</sup>	0.051	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	542.1	532.3	518.7	µg / m <sup>3</sup>	531.0	5000
6	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	2

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

Authorised Signatory

Renukamma

Quality Manager



:- END OF REPORT

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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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/16/03

## ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2023/ 6399

Report Issued Date : 20.04.2023

1.	Name of the Industry	:	M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant) Vyasnakere, 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
5.	Date of Sample Receipt	:	15.04.2023
6.	Sample Code	:	6931
7.	Analysis Starting Date	:	17.04.2023
8.	Analysis Completion Date	:	20.04.2023
9.	Sample Tested as Received		

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	658.4	653.4	648.4	µg / m <sup>3</sup>	653.4	3000
2	Sulphur Dioxide as SO <sub>2</sub>	CPCB Procedure	13.4	12.1	11.8	µg / m <sup>3</sup>	12.4	150
3	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	16.3	17.2	11.4	µg / m <sup>3</sup>	15.0	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.045	0.047	0.036	µg / m <sup>3</sup>	0.043	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/ 007	594.1	524.2	515.7	µg / m <sup>3</sup>	544.7	5000
6	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	2

### INFERENCE

Standards as per GSR277 (E)

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

Analysed by

Authorised Signatory

Renukamma

Quality Manager



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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2023/6400

Report Issued Date : 20.04.2023

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	:	15.04.2023
6.	Sample Code	:	6932
7.	Analysis Starting Date	:	17.04.2023
8.	Analysis Completion Date	:	20.04.2023
9.	Sample Tested as Received		

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	362.6	357.6	352.6	µg / m <sup>3</sup>	357.6	3000
2	Sulphur Dioxide as SO <sub>2</sub>	CPCB Procedure	8.2	7.8	6.5	µg / m <sup>3</sup>	7.5	150
3	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	9.8	8.6	9.3	µg / m <sup>3</sup>	9.2	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.031	0.028	0.022	µg / m <sup>3</sup>	0.027	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	324.1	315.4	298.7	µg / m <sup>3</sup>	312.7	5000

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

Analysed by

Authorised Signatory

Renukamma

Quality Manager



Note: 1. The results listed only to the tested samples & applicable parameters,  
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MSVAL/A/F/16/03

## ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2023/6401

Report Issued Date : 20.04.2023

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
4.	Particulars of the sample collected	:	Sample collected with High Volume Sampler
5.	Date of Sample Receipt	:	15.04.2023
6.	Sample Code	:	6933
7.	Analysis Starting Date	:	17.04.2023
8.	Analysis Completion Date	:	20.04.2023
9.	Sample Tested as Received	:	

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	764.2	759.2	754.2	µg / m <sup>3</sup>	759.2	3000
2	Sulphur Dioxide as SO <sub>2</sub>	CPCB Procedure	14.5	13.2	10.2	µg / m <sup>3</sup>	12.6	150
3	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6) - 2006	17.8	16.1	13.4	µg / m <sup>3</sup>	15.8	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.057	0.052	0.053	µg / m <sup>3</sup>	0.054	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	532.4	516.2	518.3	µg / m <sup>3</sup>	522.3	5000

### INFERENCE

Standards as per GSR277 (E)

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

Analysed by

Authorised Signatory

Renukamma

Quality Manager



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

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MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6737

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli 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
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.48	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.34	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	68	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	540	500	2000
7	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	86.6	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	26.2	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	5.12	30	100
10	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	16.6	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	38.9	250	1000
12	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	0.50	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	0.14	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	5.5	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	4.3	---	---

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



Authorised Signatory

Renukamma

Quality Manager

-: END OF REPORT:-

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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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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5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an asterisk are not accredited by NABL.



# MSV Analytical Laboratories

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

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6737

Report Issued Date: 22.04.2023

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 : 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
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Chemical parameters						
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 Acceptable limits.

Analysed by

Authorised Signatory

Renukamma

Quality Manager



END OF REPORT

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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/6738

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : R.O. Water at SMIORE Plant Premises
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 : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 22.04.2023
9. Sample tested as Received

### RESULTS

Parameters	Protocol	Unit	Result	IS 10500:2018 Specification
Total Coliform Bacteria	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml
Escherichia Coli	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml

### INFERENCE

IS - 10500 -2018 Standards

Report Status: - The above parameters are within The limits.

Verified by

Authorized Signature

Sr.Microbiologist  
Eswari



**\*\*End of the Report\*\***

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

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MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6739

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample location : Bore Well Water at Rajapura Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.58	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.54	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	210	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	1024	500	2000
7	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	348.7	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	76.6	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	38.19	30	100
10	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	52.2	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	180.9	250	1000
12	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	1.16	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	20.8	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	11.6	---	---

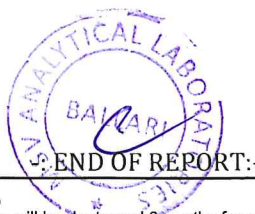
INFERENCE	IS 10500 - 2012 Standards BDL - Below Detectable Limit Report Status: - The analyzed values for above measured parameters are within the Permissible limits.
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Analysed by

Authorised Signatory

Renukamma

Quality Manager



Note: 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6739

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample location : Bore Well Water at Rajapura Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Chemical parameters						
17	Copper	IS: 3025(part-42)	mg/l	0.006	0.05	1.5
18	Manganese	IS: 3025(part-59)	mg/l	0.004	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	0.002	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.
-----------	--

Analysed by

Authorised Signatory

Renukamma

Quality Manager



Note: 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/6740

Report Issued Date: 22.04.2023

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 : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 22.04.2023
9. Sample tested as Received

### RESULTS

Parameters	Protocol	Unit	Result	IS 10500:2018 Specification
Total Coliform Bacteria	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml
Escherichia Coli	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml

INFERENCE	IS - 10500 -2018 Standards Report Status: - The above parameters are within The limits.
-----------	--

Verified by

Authorized Signature

Sr. Microbiologist  
Eswari

**\*\*End of the Report\*\***



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

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MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6741

Report Issued Date: 22.04.2023

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 Hanumanahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

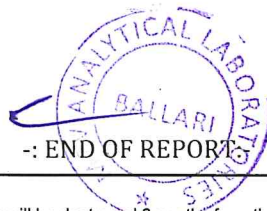
S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	6.84	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.40	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	160	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	636	500	2000
7	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	284.4	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	54.2	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	36.18	30	100
10	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	58.7	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	160.6	250	1000
12	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	2.32	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	0.40	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	12.8	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	7.5	---	---

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

Analysed by

Authorised Signatory

Renukamma  
Quality Manager



:- END OF REPORT

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

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MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6741

Report Issued Date: 22.04.2023

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 Hanumanahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Chemical parameters						
17	Copper	IS: 3025(part-42)	mg/l	0.003	0.05	1.5
18	Manganese	IS: 3025(part-59)	mg/l	0.004	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	0.004	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.
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Analysed by

Authorised Signatory

Renukamma  
Quality Manager



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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/6742

Report Issued Date: 22.04.2023

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 Hanumanahalli 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 : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 22.04.2023
9. Sample tested as Received

### RESULTS

Parameters	Protocol	Unit	Result	IS 10500:2018 Specification
Total Coliform Bacteria	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml
Escherichia Coli	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml

### INFERENCE

IS - 10500 -2018 Standards

Report Status: - The above parameters are within The limits.

Verified by

Authorized Signature

Sr. Microbiologist  
Eswari



**\*\*End of the Report\*\***

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.



# MSV Analytical Laboratories

(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 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6743

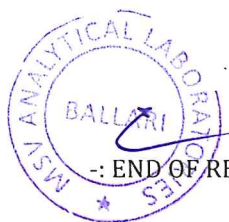
Report Issued Date: 22.04.2023

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 Munirabad Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	8.12	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.40	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	160	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	774	500	2000
7	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	294.5	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	68.7	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	29.82	30	100
10	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	87.6	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	162.9	250	1000
12	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	2.50	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	16.6	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	12.3	---	---

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

Analysed by



-: END OF REPORT:-

Authorised Signatory

Renukamma  
Quality Manager

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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6743

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample location : Bore Well Water at Munirabad Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Chemical parameters						
17	Copper	IS: 3025(part-42)	mg/l	0.002	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	0.002	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	0.001	0.05	No Relaxation
22	Chromium	IS: 3025(part-52)	mg/l	0.002	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.
-----------	--

Analysed by

Authorised Signatory

Renukamma  
Quality Manager



-: END OF REPORT

Note: 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/6744

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Bore Well Water at Munirabad 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 : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 22.04.2023
9. Sample tested as Received

## RESULTS

Parameters	Protocol	Unit	Result	IS 10500:2018 Specification
Total Coliform Bacteria	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml
Escherichia Coli	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml

INFERENCE	IS - 10500 -2018 Standards Report Status: - The above parameters are within The limits.
-----------	--

Verified by

Authorized Signature

Sr. Microbiologist  
Eswari

**\*\*End of the Report\*\***



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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6745

Report Issued Date: 22.04.2023

- 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** : Bore Well Water at Vyasanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary
- Sample Quantity** : 2 Liters
- Sample Description/condition** : Good/satisfactory
- Date of sample Collection** : 17.04.2023
- Analysis Starting Date** : 18.04.2023
- Analysis completion Date** : 22.04.2023
- Sample Tested as Received**

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.48	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.54	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	140	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	960	500	2000
7	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	314.8	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	68.4	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	34.94	30	100
10	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	88.7	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	124.9	250	1000
12	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	1.18	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	16.6	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	8.9	---	---

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

Analysed by

Authorised Signatory

Renukamma  
Quality Manager



Note : 1. The results listed only to the tested samples & applicable parameters.  
2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6745

Report Issued Date: 22.04.2023

- 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** : Bore Well Water at Vyasanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary
- Sample Quantity** : 2 Liters
- Sample Description/condition** : Good/satisfactory
- Date of sample Collection** : 17.04.2023
- Analysis Starting Date** : 18.04.2023
- Analysis completion Date** : 22.04.2023
- Sample Tested as Received**

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Chemical parameters						
17	Copper	IS: 3025(part-42)	mg/l	0.004	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	0.004	0.05	No Relaxation
22	Chromium	IS: 3025(part-52)	mg/l	0.002	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.

Analysed by

Authorised Signatory

Renukamma  
Quality Manager

-: END OF REPORT -:



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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/6746

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. 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 : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 22.04.2023
9. Sample tested as Received

### RESULTS

Parameters	Protocol	Unit	Result	IS 10500:2018 Specification
Total Coliform Bacteria	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml
Escherichia Coli	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml

### INFERENCE

IS - 10500 -2018 Standards

Report Status: - The above parameters are within The limits.

Verified by

Authorized Signature

Sr. Microbiologist  
Eswari

**\*\*End of the Report\*\***



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, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6747

Report Issued Date: 22.04.2023

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 Venkatagiri Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	6.89	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.42	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	160	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	812	500	2000
7	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	284.4	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	29.98	30	100
10	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	92.3	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	160.9	250	1000
12	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	3.14	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	0.40	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	16.1	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	10.3	---	---

### INFERENCE

IS 10500 – 2012 Standards

BDL – Below Detectable Limit

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

Analysed by

Authorised Signatory

Renukamma  
Quality Manager

END OF REPORT:-

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

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MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6747

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample location : Bore Well Water at Venkatagiri Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Chemical parameters						
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	0.002	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	0.002	0.05	No Relaxation
22	Chromium	IS: 3025(part-52)	mg/l	0.002	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.
-----------	--

Analysed by

Authorised Signatory

Renukamma  
Quality Manager



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 asterisk are not accredited by NABL.



# MSV Analytical Laboratories

(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 (1<sup>st</sup> & 2<sup>nd</sup> Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/6748

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Bore Well Water at Venkatagiri 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 : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 22.04.2023
9. Sample tested as Received

### RESULTS

Parameters	Protocol	Unit	Result	IS 10500:2018 Specification
Total Coliform Bacteria	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml
Escherichia Coli	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml

INFERENCE	IS - 10500 -2018 Standards Report Status: - The above parameters are within The limits.
-----------	--

Verified by

Authorized Signature

Sr. Microbiologist  
Eswari

**\*\*End of the Report\*\***



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

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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6749

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample location : Bore Well Water at Hosapete
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis completion Date : 22.04.2023
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.32	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.54	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	150	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	648	500	2000
7	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	210.6	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	36.6	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	28.94	30	100
10	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	84.7	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	160.9	250	1000
12	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	2.62	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	20.3	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	10.1	---	---

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

Analysed by

Authorised Signatory

Renukamma  
Quality Manager

END OF REPORT

Note: 1. The results listed only to the tested samples & applicable parameters,  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6749

Report Issued Date: 22.04.2023

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location** : Bore Well Water at Hosapete
- Sample Collected By** : MSV Analytical Laboratories, Bellary
- Sample Quantity** : 2 Liters
- Sample Description/condition** : Good/satisfactory
- Date of sample Collection** : 17.04.2023
- Analysis Starting Date** : 18.04.2023
- Analysis completion Date** : 22.04.2023
- Sample Tested as Received**

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Chemical parameters						
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	0.002	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.
-----------	--

Analysed by

Authorised Signatory

Renukamma  
Quality Manager



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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/6750

Report Issued Date: 22.04.2023

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 : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 22.04.2023
9. Sample tested as Received

### RESULTS

Parameters	Protocol	Unit	Result	IS 10500:2018 Specification
Total Coliform Bacteria	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml
Escherichia Coli	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml

INFERENCE	IS - 10500 -2018 Standards Report Status: - The above parameters are within The limits.
-----------	--

Verified by

Authorized Signature

Sr. Microbiologist

Eswari

**\*\*End of the Report\*\***

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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6751

Report Issued Date: 22.04.2023

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location : Bore Well Water at Ramgad Reservoir
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 17.04.2023
- Analysis Starting Date : 18.04.2023
- Analysis completion Date : 22.04.2023
- Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.80	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.58	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	140	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	1024	500	2000
7	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	328.7	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	82.8	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	29.57	30	100
10	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	64.4	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	130.9	250	1000
12	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	2.12	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	0.40	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	6.2	---	---

### INFERENCE

IS 10500 - 2012 Standards

BDL - Below Detectable Limit

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

Analysed by

Authorised Signatory

Renukamma  
Quality Manager



-: END OF REPORT :-

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

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MSVAL/W/F/13/03

## ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/6751

Report Issued Date: 22.04.2023

- 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** : Bore Well Water at Ramgad Reservoir
- Sample Collected By** : MSV Analytical Laboratories, Bellary
- Sample Quantity** : 2 Liters
- Sample Description/condition** : Good/satisfactory
- Date of sample Collection** : 17.04.2023
- Analysis Starting Date** : 18.04.2023
- Analysis completion Date** : 22.04.2023
- Sample Tested as Received**

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Chemical parameters						
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.
-----------	--

Analysed by

Authorised Signatory

Renukamma  
Quality Manager

END OF REPORT:-



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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/6752

Report Issued Date: 22.04.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, 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 : 17.04.2023
7. Analysis Starting Date : 18.04.2023
8. Analysis Completion Date : 22.04.2023
9. Sample tested as Received

## RESULTS

Parameters	Protocol	Unit	Result	IS 10500:2018 Specification
Total Coliform Bacteria	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml
Escherichia Coli	IS:15185:2016	Cfu/ 100ml	Absent	Shall not be detectable in 100 ml

INFERENCE	IS - 10500 -2018 Standards Report Status: - The above parameters are within The limits.
-----------	--

Verified by

Authorized Signature

Sr. Microbiologist  
Eswari

**\*\*End of the Report\*\***



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

2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months 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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