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

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

5th July 2023

Tel: +91 8395 260301/283173-199 Fax: +91 8395 260473

Ref No: SMIORE/PLANT/ENV/MR/2023-24/ 7-7-

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.

<u>Subject:</u> Submission of monthly monitoring report for the month of June-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, herewith we are submitting the environmental monitoring report of our plant for the month of June-2023 for your kind information.

Kindly acknowledge receipt of the same.

Thanking you,

The Sandur Manganese & Iron Ores Limited,

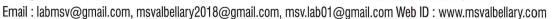
ಕ್ಟರಾ.ಮಾ.ನಿ.ಮಂಡಳ ಪ್ರಾದೇಶಿಕ ಕಭೇರಿ ವಿಜಯನಗರ, ಹೊಸವೇಗಿ ದಿನಾಂತ: 06 0 2123 ಸಹಿಯ

Tel: +91 8394 244450 / 244335



(Certified by ISO 14001-2015, ISO 45001-2018, ISO 9001-2015, ISO 22000:2018) **NABL Accredited Laboratory**

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor) Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No: Mob: 94498 03895, (0): 9945456764, 08392-255169





MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant)

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

2. Name of the location **Smiore Colony**

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

5. **Date of Monitoring** 01.06.2023

Date of Sample Receipt 6. 7

02.06.2023

Analysis Starting Date

02.06.2023

8. **Analysis Completion Date Report Issue Date** 9

05.06.2023 06.06.2023

Sampling Protocol

IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: TC407123000001394F

	1	Carrier	Shi	ft wise res	ults		Result in Avg.	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units		
		k i	1802	1806	1829			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	59.2	62.1	57.3	μg / m³	59.5	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	29.1	30.4	26.4	μg / m³	28.6	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	10.8	13.6	8.7	μg / m³	11.0	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	15.9	17.8	13.7	μg / m³	15.8	80
5	Ozone as O ₃	IS 5182(part-9)	13.2	13.5	13.0	μg / m³	13.23	100
6	Lead	IS-5182(Part22)	0.034	0.037	0.032	μg / m³	0.034	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.45	0.47	0.43	mg/m³	0.45	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.31	1.26	μg / m³	1.28	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,

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.

^{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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

Smiore Colony

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

01.06.2023 02.06.2023

7. Analysis Starting Date

02.06.2023

8. Analysis Completion Date

05.06.2023

Analysis Completion I
 Report Issue Date

05.06.2023

Report Issue Date
 Sampling Protocol

06.06.2023 IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0432

tä	17.4	V	Sh	ift wise re	sults		Result in Avg.	Tolerance
S.No	Parameter	Protocols	1	2	3	Units		limits
			0461	0462	0463			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<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.Chima Lingana Gouda Chief executive of the laboratory

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

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of 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 location

: Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

01.<mark>06.20</mark>23 02.06.2023

7. Analysis Starting Date 8. Analysis Completion Date

: 02.06.2023 : 05.06.2023

9. Report Issue Date

06.06.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: TC407123000001395F

	_	CALLY	Shii	ft wise res	ults		Result	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	
		**************************************	1803	1807	1830			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	56.8	58.2	54.1	μg / m³	56.4	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	18.1	20.3	16.2	μg / m³	18.2	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.7	11.8	7.7	μg / m³	9.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	14.2	15.6	10.7	μg / m³	13.5	80
5	Ozone as O ₃	IS 5182(part-9)	9.1	9.5	9.0	μg / m³	9.20	100
6	Lead	IS-5182(Part22)	0.026	0.028	0.024	μg / m³	0.026	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.28	0.21	mg/m³	0.24	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.32	1.34	1.30	μg / m³	1.32	20

INFERENCE

As per NAAQS Standards

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

Analysed by

B. Chinna Lingana Gouda Chief executive of the laboratory

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary,

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

01.06.2023

6. Date of Sample Receipt7. Analysis Starting Date

02.06.2023

8. Analysis Completion Date9. Report Issue Date

05.06.2023 06.06.2023

Report Issue Date
 Sampling Protocol

Dis

IS 5182 : Part 14 : 2019

sciţ	line: Ch	emical Group: Atm	ospheric Pollution	Sub G	roup: Am	bient Air	ULR No	MSVAL/20	23/0433
	S.No		Protocols	Sh	ift wise re	esults		Result in Avg.	Tolerance
	S.No	Parameter		1	2	3	Units		limits
				0461	0463	0464			
	10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
	11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1
	12	Arsenic as As	CPCR Procedure	<0.01	< 0.01	<0.01	110 / m ³	<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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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

: Vysanakere Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

01.06.2023 02.06.2023

Analysis Starting Date
 Analysis Completion Date

: 02.06.2023

9. Report Issue Date

: 05.06.2023 : 06.06.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

in the second		$\mathcal{L}_{\mathcal{L}}(Y)$	Shif	ft wise res	ults —	5000 0000	Result	Tolerance
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	limits
	4.7		1804	1808	1831			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	53.4	56.1	51.7	μg / m³	53.7	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	19.1	22.3	16.3	μg / m³	19.2	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.7	12.6	7.8	μg / m³	10.0	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	16.9	19.2	14.7	μg / m³	16.9	80
5	Ozone as O ₃	IS 5182(part-9)	9.1	9.5	8.3	μg / m³	8.97	100
6	Lead	IS-5182(Part22)	0.026	0.029	0.024	μg / m³	0.026	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.30	0.26	mg/m³	0.28	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.32	1.38	1.30	μg / m³	1.33	20

INFERENCE

As per NAAQS Standards

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

Analysed by

-: ENDOFFERORT: S

B. Chinna Lingana Gouda Chief executive of the laboratory

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Vysanakere Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

: 01.06.2023

6. Date of Sample Receipt7. Analysis Starting Date

: 02.06.2023 : 02.06.2023

7. Analysis Starting Date
8. Analysis Completion Da

05.06.2023

8. Analysis Completion Date9. Report Issue Date

: 06.06.2023

10. Sampling Protocol

IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0434

	Parameter	47	Sh	ift wise re	sults	Units	Result in Avg.	Tolerance
S.No		Protocols	1	2	3			limits
			0462	0464	0465			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Analysed by

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Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

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TC- 4071

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

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(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 sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

01.06.2023

6. Date of Sample Receipt7. Analysis Starting Date

: 02.06.2023

8. Analysis Completion Date

: 02.06.2023 : 05.06.2023

Report Issue Date
 Sampling Protocol

: 06.06.2023

2.2

: IS 5182 : Part 14 : 2019

		.0	Shit	ft wise res	ults		Result	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	
			1805	1809	1832			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	57.1	58.4	55.4	μg / m ³	57.0	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	17.3	19.2	14.2	μg / m³	16.9	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	8.6	10.8	7.8	μg / m³	9.1	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	13.9	15.6	11.8	μg / m³	13.8	80
5	Ozone as O ₃	IS 5182(part-9)	9.2	10.1	8.2	μg / m³	9.17	100
6	Lead	IS-5182(Part22)	<0.01	<0.01	<0.01	μg / m³	<0.01	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	1.38	1.41	1.36	mg/m³	1.38	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	<0.01	<0.01	<0.01	μg / m³	<0.01	20

INFERENCE

As per NAAQS Standards

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Analysed by

END OR REDUCES

B. Chinna Lingana Gouda
Chief executive of the laboratory

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(Metal & Ferro Alloys Plant)

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

Name of the location

Gunda Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5. **Date of Sample Receipt** 01.06.2023

7. **Analysis Starting Date** 02.06.2023 02.06.2023

Analysis Completion Date

05.06.2023 06.06.2023

Report Issue Date 9 10. **Sampling Protocol**

IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0435

	-	16	Sh	ift wise re	esults		Result in Avg.	Tolerance
S.No	Parameter	Protocols	1	2	3	Units		limits
			0463	0465	0466			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Analysed by

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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Smiore Colony

3. Sample Collected By MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Sub Group: Ambient Air

5. **Date of Monitoring** 06.06.2023

6. Date of Sample Receipt 7.

07.06.2023 07.06.2023

Analysis Starting Date 8. **Analysis Completion Date**

9. **Report Issue Date** 12.06.2023 13.06.2023

10. **Sampling Protocol**

Discipline: Chemical

IS 5182: Part 14: 2019

ULR No: TC407123000001627F

	- 5	Or call	Shi	ft wise resu	ılts		Degula	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units	Result in Avg.	
			2213	2214	2215			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	52.3	50.2	56.4	μg / m³	53.0	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	24.6	22.3	28.7	μg / m³	25.2	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	7.4	6.3	12.1	μg / m³	8.6	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	12.6	11.2	16.8	μg / m³	13.5	80
5	Ozone as O ₃	IS 5182(part-9)	11	9	13	μg / m³	11.0	100
6	Lead	IS-5182(Part22)	0.022	0.020	0.024	μg / m³	0.022	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.36	0.34	0.38	mg/m³	0.36	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.26	1.30	μg / m³	1.28	20

INFERENCE

As per NAAQS Standards

Group: Atmospheric Pollution

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

Analysed by

B.Chinna Lingana Gouda Chief executive of the laboratory

Authorized Signator

^{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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Sub Group: Ambient Air

2. Name of the location

: Smiore Colony

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

06.06.2023

7. Analysis Starting Date

: 07.06.2023 : 07.06.2023

8. Analysis Completion Date

12.06.2023

9. Report Issue Date 10. Sampling Protocol

13.06.2023

Discipline: Chemical

IS 5182 : Part 14 : 2019

ULR No: MSVAL/2023/0537

	Parameter		Sh	ift wise re	esults	Units	Result in Avg.	
S.No		Protocols	1	2	3			Tolerance limits
			0635	0636	0637			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	· <0.01	μg / m³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

Group: Atmospheric Pollution

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

Analysed by

END OF REPORT

Authorized Signatory

B.Chimna 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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry 1.

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring

06.06.2023

6. Date of Sample Receipt 7.

07.06.2023 07.06.2023

Analysis Starting Date 8. **Analysis Completion Date**

12.06.2023

Report Issue Date 9.

13.06.2023

10. **Sampling Protocol** IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: TC407123000001628F

			Shi	ft wise res	ults		Result in Avg.	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units		
1.0	1/2		2216	2217	2218			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	55.8	52.3	58.8	μg / m³	55.6	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	20.4	17.4	24.6	μg / m³	20.8	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	11.3	9.1	15	μg / m³	11.8	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	15.4	10.7	19.2	μg / m³	15.1	80
5	Ozone as O ₃	IS 5182(part-9)	7.6	7.8	7.9	μg / m³	7.8	100
6	Lead	IS-5182(Part22)	0.025	0.027	0.030	μg / m³	0.027	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.25	0.30	mg/m³	0.28	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.38	1.40	µg / m³	1.38	20

INFERENCE

As per NAAQS Standards

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

Analysed by

B. Ckinna 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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

: Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary,

4. Particulars of the sampling Equipments5. Date of Monitoring

Sample collected with RDS APM460 and FDS GTI-131

6. Date of Sample Receipt

06.06.2023 07.06.2023

7. Analysis Starting Date

07.06.2023

8. Analysis Completion Date

: 12.06.2023

9. Report Issue Date

13.06.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

Discip	line: Ch	emical Group: Atmo	ospheric Pollution	Sub G	roup: Am	bient Air	ULR No:	MSVAL/202	23/0538
	S.No	Parameter	Protocolo	Sh	ift wise re	sults	** **	Result in Avg.	Tolerance
	3.110	Parameter	Protocols	. 1	2	3	Units		limits
		***	*	0638	0639	0640			
	10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	. 5
	11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	_1
	12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<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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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry 1.

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location Vysanakere Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

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

Date of Monitoring

06.06.2023

6. Date of Sample Receipt 07.06.2023

7. **Analysis Starting Date** 07.06.2023 12.06.2023

Analysis Completion Date 8. Report Issue Date 9

13.06.2023

10. Sampling Protocol

Disc

IS 5182: Part 14: 2019

cipline: C	hemical Group: Atmosph	eric Pollution Su	b Group:	Ambient A	ir UL	R No: TC40	7123000	001629F
		O. L.	Shi	ft wise res	ults		Result in Avg.	Tolerance
S.No	Parameter	Protocols	1	2	3	Units		limits
			2219	2220	2221			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	54.7	53.2	57.4	μg / m³	55.1	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	20.3	17.4	23.5	μg / m³	20.4	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	14.6	11.1	17.5	μg / m³	14.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	17.9	14.8	20.9	μg / m³	17.9	80
5	Ozone as O ₃	IS 5182(part-9)	7.9	7.5	8.2	μg / m³	7.9	100
6	Lead	IS-5182(Part22)	<0.01	<0.01	<0.01	μg / m³	<0.01	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.27	0.25	0.30	mg/m³	0.27	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	<0.01	<0.01	<0.01	μg / m³		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

^{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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

Vysanakere Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

06.06.2023

6. Date of Sample Receipt

07.06.2023

7. Analysis Starting Date

07.06.2023

8. Analysis Completion Date

12.06.2023

9. Report Issue Date 10. Sampling Protocol

13.06.2023 IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0539

	Parameter		Shift wise results				Result in	Tolerance
S.No		Protocols	1	2	3	Units	Avg.	limits
		*	0641	0642	0643			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	, 5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<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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14

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(Certified by ISO 14001-2015, ISO 45001-2018, ISO 9001-2015, ISO 22000:2018)

NABL Accredited Laboratory

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



TC-4071

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

06.06.2023 07.06.2023

7. Analysis Starting Date

: 07.06.2023

8. Analysis Completion Date

12.06.2023

9. Report Issue Date 10. Sampling Protocol 13.06.2023 IS 5182 : Part 14 : 2019

cipline: Cl	nemical Group: Atmosph	eric Pollution	Sub Group: A	Ambient A	ir ULI	R No: TC40	71230000	001630F
	7.	CALL	Shif	t wise res	ults		Result	Tolerance
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	limits
		r .	2222	2223	2224			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	52.4	50.5	55.2	μg / m³	52.7	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	27.8	25.6	30.2	μg / m³	27.9	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	10.2	8	15	$\mu g / m^3$	11.1	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	17.9	15.6	20.8	μg / m³	18.1	80
5	Ozone as O ₃	IS 5182(part-9)	13.0	11	15	μg / m³	13.0	100
6	Lead	IS-5182(Part22)	0.030	0.028	0.032	$\mu g / m^3$	0.030	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.40	0.38	0.43	mg/m³	0.40	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/000	< 0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	3 <0.01	<0.01	<0.01	μg / m³	<0.01	20

INFERENCE

As per NAAQS Standards

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

Analysed by

END OF REFORTS

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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Gunda Village

Sample Collected By 4.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring

06.06.2023

Date of Sample Receipt 6.

07.06.2023 07.06.2023

Analysis Starting Date Analysis Completion Date

12.06.2023

Report Issue Date **Sampling Protocol**

13.06.2023 IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0540

		1		Sh	ift wise re	sults	\	Result in	Tolerance
S.No	Parameter		Protocols	1	2	3	Units	Avg.	limits
	1			0644	0645	0646			
10	Benzene as C ₆ H ₆	0	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
11	Benzo (α) Pyrene (BaP)		CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1
12	Arsenic as As		CPCB Procedure	<0.01	<0.01	<0.01	μg / m ³	<0.01	6

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

Analysed by

B.Chinna Lingana Gouda Chief executive of the laboratory

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

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

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

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C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor) Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No: Mob: 94498 03895, (0): 9945456764, 08392-255169 Email: labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID: www.msvalbellary.com

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Smiore Colony

Name of the location Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

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

5. Date of Monitoring 09.06.2023

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

10.06.2023 10.06.2023

8. **Analysis Completion Date**

9. **Report Issue Date** 14.06.2023 15.06.2023

10. **Sampling Protocol** IS 5182: Part 14: 2019

Discip	pline: Cl	nemical Group: Atmosph	eric Pollution S	ub Group:	Ambient A	ir UL	R No: TC40	7123000	001789F
			2 (1 / 1	Shi	ft wise res	ults		D 1	m 1
ž	S.No	Parameter	Protocols	1	2	3	Units	Result in Avg.	Tolerance limits
				2501	2502	2503			
	1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	65.8	62.7	57.3	μg / m³	61.9	100
	2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	22.5	19.4	17.1	μg / m³	19.7	60
	3	Sulphur Dioxide as SO _x	IS-5182(Part-	15.6	13.2	11.25	μg / m ³	13.4	80
	4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	18.65	16.7	15.05	μg / m³	16.8	80
	5	Ozone as O ₃	IS 5182(part-9):2019	9.2	8.7	8.4	μg / m³	8.8	100
	6	Lead	IS-5182(Part-	0.034	0.032	0.028	μg / m³	0.031	1
	7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.45	0.42	0.38	mg/m³	0.42	2
	8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
	9	Nickel as Ni	IS-5182(part- 26):2020	1.28	1.24	1.22	μg / m³	1.25	20
	10	Arsenic as AS	MSVAL/SOP/A/009 As per CPCB Manual		<0.01	<0.01	μg / m³	<0:01	6

INFERENCE

As per NAAQS Standards

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

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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Sub Group: Ambient Air

Name of the location

Smiore Colony

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring

09.06.2023

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

10.06.2023

8.

10.06.2023

Analysis Completion Date

14.06.2023

9. Report Issue Date

15.06.2023

10. **Sampling Protocol**

Discipline: Chemical

IS 5182: Part 14: 2019

ULR No: MSVAL/2023/0417

9	Parameter	2 6	Sh	ift wise re	sults	Units	Result in Avg.	Tolerance
S.No		Protocols	1	2	3			limits
			0770	0771	0772			
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

Group: Atmospheric Pollution

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

Analysed by

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 : labmsy@gmail.com, msyalbellary2018@gmail.com, msy.lab01@gmail.com Web ID : www.msyalbellary.com



MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Sample Collected By 3.

Kallahalli Village MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5.

09.06.2023 10.06.2023

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

10.06.2023

Analysis Completion Date 8. 9. **Report Issue Date**

14.06.2023 15.06.2023

10. **Sampling Protocol** IS 5182: Part 14: 2019

line: Cl	nemical Group: Atmosph	eric Pollution Su	171	Ambient A	J	d .	071230000	
S.No	Parameter	Protocols	1	2	3	Units	Result in Avg.	Tolerance limits
			2504	2505	2506			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	65.8	62.7	57.3	μg / m³	61.9	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	22.5	19.4	17.1	μg / m³	19.7	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	15.6	13.2	11.25	μg / m³	13.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	18.65	16.7	15.05	μg / m³	16.8	80
5	Ozone as O ₃	IS 5182(part-9):2019	9.2	8.7	8.4	$\mu g / m^3$	8.8	100
6	Lead	IS-5182(Part-	0.034	0.032	0.028	μg / m³	0.031	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.45	0.42	0.38	mg/m³	0.42	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.28	1.24	1.22	μg / m³	1.25	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

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

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 $Sanganakallu\ Road,\ KEB\ Circle,\ Ballari\ \cdot\ 583103\ \ \textbf{Contact}\ \textbf{No}: \\ \textbf{Mob}: 94498\ \ 03895, (0): 9945456764, 08392-255169$

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

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

: Kallahalli Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

09.06.2023 10.06.2023

7. Analysis Starting Date

: 10.06.2023

8. Analysis Completion Date

: 14.06.2023

9. Report Issue Date

: 15.06.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

Disci	pline: Ch	emical Group: Atm	ospheric Pollution	Sub G	roup: Am	bient Air	ULR No:	MSVAL/202	23/0418				
			(Y)	Shift wise results		Shift wise results		Shift wise results		Shift wise results		Result in	Tolerance
	S.No	Parameter	Protocols	1	2	3	Units	Avg.	limits				
		7/3		0773	0774	0775							
	11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5				
	12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1				

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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TC- 4071

ANALYSIS REPORT OF AMBIENT AIR QUALITY

MSVAL/AA/RF/01/00

Name and Address of 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 location

: Vysanakere Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

09.06.2023

6. Date of Sample Receipt7. Analysis Starting Date

10.06.2023

8. Analysis Completion Date9. Report Issue Date

14.06.2023 15.06.2023

9. Report Issue Date10. Sampling Protocol

: IS 5182 : Part 14 : 2019

			Shi	ft wise res	ults		Result	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	
	not of the state o	✓	2507	2508	2509			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	65.8	62.7	57.3	μg / m³	61.9	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	22.5	19.4	17.1	μg / m³	19.7	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	15.6	13.2	11.25	μg / m³	13.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	18.65	16.7	15.05	μg / m³	16.8	80
5 ,	Ozone as O ₃	IS 5182(part-9):2019	9.2	8.7	8.4	μg / m³	8.8	100
6	Lead	IS-5182(Part-	0.034	0.032	0.028	μg / m³	0.031	.1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.45	0.42	0.38	mg/m³	0.42	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.28	1.24	1.22	μg / m³	1.25	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Analysed by



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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Vysanakere Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

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

Date of Monitoring 5.

09.06.2023

Date of Sample Receipt

10.06.2023

Analysis Starting Date 7. **Analysis Completion Date** 10.06.2023 14.06.2023

8.

9. Report Issue Date 15.06.2023

Sampling Protocol 10.

IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0419

)	- A	Protocols	Sh	ift wise re	sults		Result in	Tolerance
S.No	Parameter		1	2	3	Units	Avg.	limits
			0776	0777	0778			×
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory 2 CP. 1

B.Chinna Lingana Gouda Chief executive of the laboratory

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TC- 407

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of 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 location

Gunda Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring
6. Date of Sample Receipt
7. Applying Starting Page

09.06.2023 10.06.2023

7. Analysis Starting Date8. Analysis Completion Date

10.06.2023 14.06.2023

9. Report Issue Date 10. Sampling Protocol

: 15.06.2023 : IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air U

ULR No: TC407123000001792F

	14		Shi	ft wise res	ults		D 14	m 1
S.No	Parameter	Protocols	1 2		3	Units	Result in Avg.	Tolerance limits
	2.2	77	2510	2511	2512			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	65.8	62.7	57.3	μg / m³	61.9	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	22.5	19.4	17.1	μg / m³	19.7	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	15.6	13.2	11.25	μg / m³	13.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	18.65	16.7	15.05	μg / m³	16.8	80
5	Ozone as O ₃	IS 5182(part-9):2019	9.2	8.7	8.4	μg / m³	8.8	100
6	Lead	IS-5182(Part-	0.034	0.032	0.028	μg / m³	0.031	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.45	0.42	0.38	mg/m³	0.42	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.28	1.24	1.22	μg / m³	1.25	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Analysed by



B.Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

Gunda Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

09.06.2023

6. Date of Sample Receipt

10.06.2023

7. Analysis Starting Date

10.06.2023

8. Analysis Completion Date

14.06.2023 15.06.2023

9. Report Issue Date 10. Sampling Protocol

IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0420

S.No	Parameter	16	Sh	ift wise re	esults		Result in	Tolerance
		Protocols	1	2	. 3	Units	Avg.	limits
		144	0779	0780	0781	and the same		
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

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

Analysed by

CAL LABOURNI SE BALL SON LOS S

Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

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

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

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

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

24

^{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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of 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 location

Sample Collected By 3.

Smiore Colony MSV Analytical Laboratories, Bellary.

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

Date of Monitoring 5.

13.06.2023

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

14.06.2023 14.06.2023

8. **Analysis Completion Date**

18.06.2023

9. **Report Issue Date** 19.06.2023

10. **Sampling Protocol** IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air ULR No: TC407123000002096F

			Shi	ft wise res	ults		Posult	Tolerance
S.No	Parameter	Protocols	1/	2	3	Units	Result in Avg.	limits
			2982	2983	2984			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	51.7	53.4	50.5	μg / m³	51.9	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	28.2	30.6	24.6	μg / m³	27.8	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2):2017	8.85	11.25	8.4	μg / m³	9.5	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6):2017	12.65	15.45	11.1	μg / m³	13.1	80
5	Ozone as O ₃	IS 5182(part-9):2019	9.8	10.2	8.7	μg / m³	9.6	100
6	Lead	IS-5182(Part- 22):2019	0.020	0.022	0.018	μg / m³	0.020	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.48	0.50	0.46	mg/m³	0.48	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.20	1.22	1.77	μg / m³	1.40	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual: 2022	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

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

^{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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Sub Group: Ambient Air

2. Name of the location **Smiore Colony**

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5.

13.06.2023

Date of Sample Receipt

14.06.2023

7. **Analysis Starting Date** 14.06.2023

Analysis Completion Date 8.

18.06.2023

Report Issue Date

19.06.2023

10. **Sampling Protocol**

Discipline: Chemical

IS 5182: Part 14: 2019

ULR No: MSVAL/2023/0515

-	70		Sh	ift wise re	sults		Result in	Tolerance
S.No	Parameter	Protocols	1	2	3	Units	Avg.	limits
		-	0950	0951	0952			
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

Group: Atmospheric Pollution

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

^{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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ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of 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 location Kallahalli Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4. **Date of Monitoring** 5.

Sample collected with RDS APM460 and FDS GTI-131 13.06.2023

Date of Sample Receipt 6.

14.06.2023

Analysis Starting Date 7.

14.06.2023 18.06.2023

8. **Analysis Completion Date** Report Issue Date 9.

19.06.2023

Sampling Protocol 10.

IS 5182: Part 14: 2019

			Shi	ft wise resu	ılts		Result	Tolerance
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	limits
			2985	2986	2987			
1	Particulate Matter PM ₁₀	IS-5182(Part-23):2017	58.2	55.4	50.3	μg / m³	54.6	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part-24):2019	17.8	16.2	15.1	μg / m³	16.4	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2):2017	10.15	9.25	7.35	μg / m³	8.9	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6):2017	13.15	12.15	10.25	μg / m³	11.9	80
5	Ozone as O ₃	IS 5182(part-9):2019	11.2	12.4	10.4	μg / m³	11.3	100
6	Lead	IS-5182(Part-22):2019	0.041	00.52	0.036	μg / m³	0.199	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.31	0.26	mg / m³	0.28	2
8	Ammonia as NH ₃	IS-5182(part-25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part-26):2020	2.12	3.36	1.24	μg / m³	2.24	20
10	Arsenic as AS	MSVAL/SÖP/A/009 - As per CPCB Manual: 2022	<0.01	<0.01	<0.01	μg / m³	<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

^{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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of 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 location

Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

13.06.2023

6. Date of Sample Receipt

14.06.2023

7. Analysis Starting Date

: 14.06.2023 : 18.06.2023

8. Analysis Completion Date9. Report Issue Date

19.06.2023

10. Sampling Protocol

Disc

IS 5182 : Part 14 : 2019

cip	line: Ch	emical Group: Atn	ospheric Pollution	Sub G	roup: Am	bient Air	ULR No:	MSVAL/202	23/0517
			G	Sh	ift wise re	esults	**	Result in	Tolerance
	S.No	Parameter	Protocols	1	. 2	3	Units	Avg.	limits
		100		0956	0957	0958			i-
	11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
	12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

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

Analysed by

CAL LAND POPULATION OF THE PARTY OF THE PART

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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ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

: Vysanakere Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

13.06.2023

6. Date of Sample Receipt7. Analysis Starting Date

: 14.06.2023 : 14.06.2023

8. Analysis Completion Date

: 18.06.2023 : 19.06.2023

Report Issue Date
 Sampling Protocol

Disc

: IS 5182 : Part 14 : 2019

	-		Shi	ft wise res	ults		Result	Tolerance
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	limits
			2988	2989	2990			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	58.2	60.4	56.8	μg / m³	58.5	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	26.1	28.5	24.6	μg / m³	26.4	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	10.95	13.3	10.55	μg / m ³	11.6	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	15.05	17.95	13.05	μg / m³	15.4	80
5	Ozone as O ₃	IS 5182(part-9):2019	5.6	5.8	5.4	μg / m³	5.6	100
6	Lead	IS-5182(Part-	0.076	0.078	0.074	μg / m³	0.076	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.30	0.26	mg/m³	0.28	. 2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.28	1.30	1.26	μg / m³	1.28	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Analysed by

ENBORTHARM'E

Authorized Signatory

B.Chima Lingana Gouda

Chief executive of the laboratory

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry 1.

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location Vysanakere Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5.

13.06.2023

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

14.06.2023 14.06.2023

Analysis Completion Date 8.

18.06.2023

Report Issue Date 9.

19.06.2023

Sampling Protocol

IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0516

,	12	Z	Sh	ift wise re	sults		Result in	Tolerance
S.No	Parameter	Protocols	1	2	3	Units	Avg.	limits
	//		0952	0953	0954			
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

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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ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Gunda Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

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

Date of Monitoring 5.

13.06.2023

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

14.06.2023 14.06.2023

8. **Analysis Completion Date** Report Issue Date 9.

18.06.2023 19.06.2023

10. **Sampling Protocol** IS 5182: Part 14: 2019

		J. STAN	Shi	ft wise res	ults			met
S.No	Parameter	Protocols	1	2	3	Units	Result in Avg.	Tolerance limits
	Annual Marie	10-	2991	2992	2993	Ti.		
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	56.1	53.1	50.9	μg / m³	53.4	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	18.3	17.1	15.7	μg / m³	17.0	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	10.15	8.45	7.35	μg / m³	8.7	80.
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	16.65	14.25	12.45	μg / m³	14.5	80
5 .	Ozone as O ₃	IS 5182(part-9):2019	8.7	9.2	7.4	μg / m³	8.4	100
6	Lead	IS-5182(Part-	0.018	0.020	0.016	μg / m³	0.018	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.38	0.41	0.36	mg/m³	0.38	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.24	2.41	1.21	μg / m³	1.62	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:	<0.01	<0.01	<0.01	μg / m³	<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 - LP. B.Chinga Lingana Gouda Chief executive of the laboratory

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location : Gu

: Gunda Village: MSV Analytical Laboratories, Bellary.

3. Sample Collected By4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring : 13.06.2023
6. Date of Sample Receipt : 14.06.2023
7. Analysis Starting Date : 14.06.2023
8. Analysis Completion Date : 18.06.2023

Analysis Completion Date : 18.06.2023 Report Issue Date : 19.06.2023

Group: Atmospheric Pollution

10. Sampling Protocol

Discipline: Chemical

2.

IS 5182 : Part 14 : 2019

Sub Group: Ambient Air ULR No: MSVAL/2023/0518

	4	A.	Sh	ift wise re	sults	Unite	Tolerance	
S.No	Parameter	Protocols	1	2	3	Units	Avg.	limits
	A.		0959	0960	0961			
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

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

Analysed by

Authorized Signatory

B.Chinda Lingana Gouda
Chief executive of the laboratory

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

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

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

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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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location : Smiore Colony

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring
6. Date of Sample Receipt

16.06.2023 17.06.2023 17.06.2023

Analysis Starting Date
 Analysis Completion Date
 Report Issue Date

: 22.06.2023 : 23.06.2023

Report Issue Date
 Sampling Protocol

2.

IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air ULR No: TC407123000002342F

			Shif	ft wise resi	ults		n 1	Tolerance
S.No	Parameter	Protocols	1/1/	2	3	Units	Result in Avg.	limits
	3		3362	3363	3364			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	63.4	60.2	66.5	μg / m³	63.4	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	29.8	25.3	32.3	μg / m³	29.1	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2):2017	19.9	16.1	24.3	μg / m³	20.1	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6):2017	28.8	24.7	32.9	μg / m³	28.8	80
5	Ozone as O ₃	IS 5182(part-9):2019	8.5	8.3	8.7	μg / m³	8.5	100
6	Lead	IS-5182(Part- 22):2019	0.037	0.033	0.038	μg / m³	0.036	1
7 .	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.27	0.25	0.29	mg/m³	0.27	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.93	1.90	1.97	μg / m³	1.93	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual: 2022	<0.01	<0.01	<0.01	μg / m³	<0.01	6

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

Analysed by

TO PAVIANCE TO STATE OF THE PAVIANCE OF THE PA

Authorized Signatory

Hanumanthaiah. P Technical Manager

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

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

L. Name and Address of 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 location

Smiore Colony

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring :
6. Date of Sample Receipt :
7. Analysis Starting Date :

: 17.06.2023 : 17.06.2023

8. Analysis Completion Date9. Report Issue Date

: 22.06.2023 : 23.06.2023

16.06.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0605

	10		Sh	ift wise re	sults		Result in	Tolerance
S.No	Parameter	Protocols	1	2	3	Units	Avg.	limits
	- Landania		1099	1100	1101			Λ.
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Hanumanthaiah. P Technical Manager

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TC- 4071

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

: Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

16.06.2023

6. Date of Sample Receipt

17.06.2023

7. Analysis Starting Date8. Analysis Completion Date

: 17.06.2023 : 22.06.2023

9. Report Issue Date

: 23.06.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

isciplii	ne: Chemical Group: Atmos	pheric Pollution Su	ıb Group: A	mbient Air	ULR	LR No: TC407123000002343F			
			Shi	ft wise resu	ılts		Result	Tolerance	
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	limits	
		CALL	3365	3366	3367				
1	Particulate Matter PM ₁₀	IS-5182(Part-23):2017	51.2	47.6	55.7	μg / m³	51.5	100	
2	Particulate Matter or PM _{2.5}	IS-5182(Part-24):2019	19.3	14.3	24.6	μg / m³	19.4	60	
3	Sulphur Dioxide as SO _x	IS-5182(Part-2):2017	15.3	10.9	20.1	μg / m³	15.4	. 80	
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6):2017	20.9	16	24.6	μg / m³	20.5	80	
5	Ozone as O ₃	IS 5182(part-9):2019	8.0	7.2	8.8	μg / m³	8.0	100	
6	Lead	IS-5182(Part-22):2019	0.036	0.033	0.037	μg / m³	0.035	1	
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.31	0.29	0.24	mg/m³	0.28	2	
8	Ammonia as NH ₃	IS-5182(part-25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400	
9	Nickel as Ni	IS-5182(part-26):2020	1.31	1.27	1.35	μg / m³	1.31	20	
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual: 2022	<0.01	<0.01	<0.01	μg / m³	<0.01	6	

INFERENCE

As per NAAQS Standards

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

Analysed by

ENTICAL LAND CONTINUE STORY STORY STORY STORY

Authorized Signatory Hanumanthaiah. P Technical Manager

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

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Kallahalli Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5.

16.06.2023

Date of Sample Receipt

17.06.2023

7. **Analysis Starting Date** 17.06.2023

Analysis Completion Date 8.

22.06.2023

9. Report Issue Date 23.06.2023

Sampling Protocol 10.

IS 5182: Part 14: 2019

Discip	oline: Ch	emical Group: Atm	ospheric Pollution	Sub G	roup: Am	bient Air	ULR No	MSVAL/202	23/0606
		_	O. V.	Sh	ift wise re	esults		Result in	Tolerance
	S.No	Parameter	Protocols	1	2	3	Units	Avg.	limits
			r 1	1102	1103	1104			
	11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
	12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Hanumanthaiah. P **Technical Manager**

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TC- 4071

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location : Vysanakere Village

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

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

 5. Date of Monitoring
 : 16.06.2023

 6. Date of Sample Receipt
 : 17.06.2023

 7. Analysis Starting Date
 : 17.06.2023

 8. Analysis Completion Date
 : 22.06.2023

 9. Report Issue Date
 : 23.06.2023

Name and Address of Industry

10. Sampling Protocol : IS 5182 : Part 14 : 2019

		x (Y)	Shi	ft wise res	ults		Result in Avg.	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units		
	344	No.	3368	3369	3370			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	48.2	47.3	49.8	μg / m³	48.4	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	20.3	19.6	21.6	μg / m³	20.5	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	14.3	13	15	μg / m³	14.1	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	18.9	17.9	19.7	μg / m³	18.8	.80
5	Ozone as O ₃	IS 5182(part-9):2019	7.8	7.6	8.3	$\mu g / m^3$	7.9	100
6	Lead	IS-5182(Part-	0.031	0.029	0.033	μg / m³	0.031	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.30	0.29	0.32	mg/m³	0.30	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.25	1.22	1.28	μg / m³	1.25	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:		<0.01	<0.01	μg / m³	<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 REPORTS

BALLARI) A

SW + SY

Authorized Signatory

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

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of 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 location Vysanakere Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

5. **Date of Monitoring**

16.06.2023

Date of Sample Receipt 6.

17.06.2023

7. **Analysis Starting Date** 17.06.2023

Analysis Completion Date

22.06.2023

Report Issue Date 9

23.06.2023

Sampling Protocol

IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0607

	Parameter	Protocols	Sh	Shift wise results			Result in	Tolerance
S.No			1	2	3	Units	Avg.	limits
			1105	1106	1107		8	WARRY TO THE REAL PROPERTY.
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory Hanumanthaiah, P

Technical Manager

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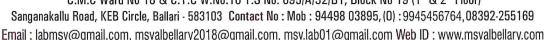
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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry 1.

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

(Metal & Ferro Alloys Plant)

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

Name of the location **Gunda Village**

MSV Analytical Laboratories, Bellary.

Sample Collected By 3. Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5.

16.06.2023 17.06.2023

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

17.06.2023

Analysis Completion Date 8. Report Issue Date 9.

22.06.2023 23.06.2023

10. Sampling Protocol

2.

Disc

IS 5182: Part 14: 2019

pline: Cl	hemical Group: Atmosph	eric Pollution Su	b Group:	Ambient A	ir UL	R No: TC40	7123000	002345F	
			Shi	ft wise resu	ults		D le	Tolerance limits	
S.No	Parameter	Protocols	1	2	3	Units	Result in Avg.		
		24 (Y)(3371	3372	3373		0	54 9 H	
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	45.2	41.3	49.2	μg / m³	45.2	100	
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	15.3	11.2	18.8	μg / m³	15.1	60	
3	Sulphur Dioxide as SO _x	IS-5182(Part-	8.1	6.0	12.2	μg / m³	8.8	80	
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	10.1	6.9	14.9	μg / m³	10.6	80	
5	Ozone as O ₃	IS 5182(part-9):2019	7.9	7.7	8.1	μg / m³	7.9	100	
6	Lead	IS-5182(Part-	0.025	0.023	0.027	μg / m³	0.025	1	
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.22	0.26	mg/m³	0.24	2	
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400	
9	Nickel as Ni	IS-5182(part- 26):2020	1.25	1.23	1.27	µg / m³	1.25	20	
10	Arsenic as AS	MSVAL/SOP/A/009 -	<0.01	<0.01	<0.01	μg / m³	<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

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

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ANALYSIS REPORT OF AMBIENT AIR QUALITY

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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 sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

16.06.2023 17.06.2023

7. Analysis Starting Date

17.06.2023

8. Analysis Completion Date9. Report Issue Date

22.06.2023 23.06.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0608

	Parameter	100	Sh	ift wise re	esults	Units	Result in Avg.	Tolerance
S.No	Parameter	Protocols	1	2	3			limits
			1108	1109	1110	3.		
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Hanumanthaiah. P Technical Manager

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

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

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



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

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



TC- 4071

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

: Smiore Colony

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

20.06.2023

7. Analysis Starting Date 8. Analysis Completion Date

: 21.06.2023 : 24.06.2023

9. Report Issue Date 10. Sampling Protocol : 26.06.2023 : IS 5182 : Part 14 : 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air ULR No: TC407123000002630F

-			Shi	ft wise res	ults		Decelo	Tolerance limits
S.No	Parameter	Protocols	//1/ ,	2	3	Units	Result in Avg.	
			3695	3695	3698			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	60.2	56.3	63.3	μg / m³	59.9	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	20.3	17.2	23.4	μg / m³	20.3	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2):2017	11.2	9.5	15.4	μg / m³	12.0	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6):2017	14.9	11.1	18.0	μg / m³	14.7	80
5	Ozone as O ₃	IS 5182(part-9):2019	9.1	8.8	9.3	μg / m³	9.07	100
6	Lead	IS-5182(Part- 22):2019	0.024	0.022	0.026	μg / m³	0.024	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.45	0.43	0.47	mg/m³	0.45	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.27	1.25	1.29	μg / m³	1.27	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual: 2022	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Analysed by

TEND OF REPORT

Authorized Signatory
Hanumanthaiah. P

Technical 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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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

. Name and Address of 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 location

Smiore Colony

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt7. Analysis Starting Date

20.06.2023 21.06.2023

8. Analysis Completion Date

: 21.06.2023 : 24.06.2023

9. Report Issue Date 10. Sampling Protocol : 26.06.2023 : IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0694

	Parameter		Sh	ift wise re	sults	Units	Result in Avg.	Tolerance
S.No		Protocols	1	2	3			limits
	hale		1262	1263	1264			
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

TSW * S3

Authorized Signatory

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

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

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TC-407

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

: Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

20.06.2023

6. Date of Sample Receipt7. Analysis Starting Date

: 21.06.2023 : 21.06.2023

8. Analysis Completion Date

: 24.06.2023

9. Report Issue Date

26.06.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

isciplir	e: Chemical Group: Atmo	b Group: A	mbient Air	ULR	R No: TC407123000002631F			
			Shi	ft wise resu	ılts		Result in Avg.	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units		
		- CONTRACTOR	3698	3699	3700			
1	Particulate Matter PM ₁₀	IS-5182(Part-23):2017	58.3	55.3	62.3	μg / m³	58.6	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part-24):2019	21.3	16.4	24.5	μg / m³	20.7	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2):2017	11.9	13.2	21	μg / m³	15.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6):2017	17.9	13.2	21	μg / m³	17.4	80
5	Ozone as O ₃	IS 5182(part-9):2019	8.7	8.5	8.9	μg / m³	8.70	100
6	Lead	IS-5182(Part-22):2019	0.023	0.021	0.025	μg / m³	0.023	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.35	0.33	0.37	mg / m³	0.35	2
8	Ammonia as NH ₃	IS-5182(part-25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part-26):2020	1.26	1.23	1.29	μg / m³	1.26	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual: 2022	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Analysed by

BAPPARIOR STORY

Authorized Signatory

Hanumanthaiah. P Technical Manager

^{2.} Water samples will destroyed after 10days, Filler papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will 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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

20.06.2023

6. Date of Sample Receipt

21.06.2023 21.06.2023

7. Analysis Starting Date

24.06.2023

8. Analysis Completion Date

24.06.2023 26.06.2023

Report Issue Date
 Sampling Protocol

Disci

: IS 5182 : Part 14 : 2019

ip	pline: Chemical Group: Atmospheric Pollution				roup: Am	bient Air	ULR No: MSVAL/2023/0695			
		Parameter	TY	Sh	ift wise re	esults		Result in	Tolerance	
	S.No		Protocols	1	2	3	Units	Avg.	limits	
	_			1265	1266	1267				
	11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5	
	12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1	

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Hanumanthaiah. P Technical Manager

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NABL Accredited Laboratory

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TC-4071

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

: Vysanakere Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

20.06.2023 21.06.2023

6. Date of Sample Receipt7. Analysis Starting Date

: 21.06.2023

8. Analysis Completion Date

: 24.06.2023

9. Report Issue Date

: 26.06.2023

10. Sampling Protocol : IS 5182 : Part 14 : 2019

		AND COLOR	Shif	ft wise res	ults		Result	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	
	3		3701	3702	3703			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	60.2	56.3	63.2	μg / m³	59.9	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	20.3	16.3	23.8	μg / m³	20.1	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	10.9	7	14.8	μg / m³	10.9	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	16.8	14.2	20.8	μg / m³	17.3	80
5	Ozone as O ₃	IS 5182(part-9):2019	7.92	7.88	7.95	$\mu g / m^3$	7.92	100
6	Lead	IS-5182(Part-	1.17	1.15	1.19	μg / m³	1.17	1
7 .	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.23	0.21	0.25	mg/m³	0.23	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	µg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	0.17	0.14	0.19	µg / m³	0.17	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Analysed by

PEND OF TEPPORT A BALLANIO

Authorized Signatory

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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

Vysanakere Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

20.06.2023 21.06.2023

7. Analysis Starting Date

21.06.2023

8. Analysis Completion Date

24.06.2023

9. Report Issue Date 10. Sampling Protocol : 26.06.2023 : IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0696

	Parameter	Protocols	Sh	Shift wise results			Result in	Tolerance
S.No			1	2	3	Units	Avg.	limits
			1268	1269 1270				
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Hanumanthaiah. P Technical 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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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Gunda Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5. **Date of Sample Receipt** 6.

20.06.2023 21.06.2023

7. **Analysis Starting Date** 21.06.2023

8. **Analysis Completion Date** 24.06.2023 26.06.2023

9. **Report Issue Date** 10. **Sampling Protocol**

IS 5182: Part 14: 2019

			Shif	t wise res	ults		D 14	m-1
S.No	Parameter	Protocols	1//	2	3	Units	Result in Avg.	Tolerance limits
	Ale	J-	3704	3705	3706		8	
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	59.3	55.6	63.2	μg / m³	59.4	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	21.3	16.3	24.6	μg / m³	20.7	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	12.1	8.1	15.3	μg / m³	11.8	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	16.8	11.8	20.3	μg / m³	16.3	80
5	Ozone as O ₃	IS 5182(part-9):2019	8.7	8.5	8.9	$\mu g / m^3$	8.70	100
6	Lead	IS-5182(Part-	0.025	0.022	0.028	μg / m³	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.34	0.32	0.36	mg/m³	0.34	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.23	1.19	1.27	μg / m³	1.23	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:	<0.01	<0.01	<0.01	μg / m³	<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

Hanumanthaiah. P **Technical Manager**

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

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of 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 location

Sample Collected By

Gunda Village MSV Analytical Laboratories, Bellary.

3. Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring

20.06.2023 21.06.2023

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

21.06.2023

8. **Analysis Completion Date Report Issue Date**

24.06.2023 26.06.2023

Sampling Protocol

IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air ULR No: MSVAL/2023/0697

S.No	Parameter		Sh	ift wise re	esults	Units	Result in Avg.	Tolerance
		Protocols	1	2	3			limits
		Land Control of the C	1271	1272	1273	1		-9
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

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

Analysed by

Authorized Signatory

Hanumanthaiah. P **Technical Manager**

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

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Email : labmsv@gmail.com, msvalbellarv2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellarv.com



TC- 407

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

3. Sample Collected By

Smiore Colony

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

: 23.06.2023 : 24.06.2023

6. Date of Sample Receipt7. Analysis Starting Date

: 24.06.2023 : 26.06.2023

8. Analysis Completion Date9. Report Issue Date

: 27.06.2023 : IS 5182 : Part 14 : 2019

10. Sampling Protocol

ULR No: TC407123000002967F Sub Group: Ambient Air Group: Atmospheric Pollution Discipline: Chemical Shift wise results Tolerance Result Units **Protocols** Parameter 2 3 S.No 1 limits in Avg. 4058 4059 4060 IS-5182(Part-68.2 70.2 67.2 $\mu g / m^3$ 68.5 100 1 Particulate Matter PM₁₀ 23):2017 IS-5182(Part-25.9 27.6 60 27.8 292 $\mu g / m^3$ 2 Particulate Matter or PM25 24):2019 11.2 80 Sulphur Dioxide as SO, IS-5182(Part-2):2017 11.2 12.2 10.1 $\mu g / m^3$ 3 10 11.1 80 IS-5182(Part-6):2017 11.2 12 $\mu g / m^3$ 4 Oxides of Nitrogen as NOx IS 5182(part-9):2019 20.2 24.1 20.6 $\mu g / m^3$ 21.6 100 5 Ozone as O₃ IS-5182(Part-0.060 0.023 0.075 1 0.083 $\mu g / m^3$ 6 Lead 22):2019 LAB SOP 0.35 2 0.35 0.37 033 7 Carbon Monoxide as CO mg/m^3 MSVAL/SOP/A/007 IS-5182(part-< 0.01 400 < 0.01 < 0.01 < 0.01 8 Ammonia as NH₃ $\mu g / m^3$ 25):2018 IS-5182(part-20 1.24 1.23 1.20 $\mu g / m^3$ 1.22 9 Nickel as Ni 26):2020

INFERENCE

Arsenic as AS

As per NAAQS Standards

MSVAL/SOP/A/009 -As per CPCB Manual:

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

< 0.01

< 0.01

 $\mu g / m^3$

< 0.01

Analysed by

10

TICAL LABORATION OF THE PARTY AND ACTION AS SHE

Authorized Signatory

< 0.01

6

lote: 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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Smiore Colony

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

23.06.2023

7. Analysis Starting Date

: 24.06.2023 : 24.06.2023

8. Analysis Completion Date

: 26.06.2023

9. Report Issue Date

: 27.06.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

Discipline: Chemical Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/783

S.No	Parameter	Protocols	Sh	ift wise re	sults		Result in Avg.	Tolerance
			1	2	3	Units		limits
	144		1426	1427	1428	, a		
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Hanumanthaiah. P Technical Manager

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Kallahalli Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5. **Date of Sample Receipt** 6.

23.06.2023 24.06.2023

Analysis Starting Date 7.

24.06.2023

Analysis Completion Date 8. Report Issue Date

26.06.2023 27.06.2023

9.

IS 5182: Part 14: 2019

Sampling Protocol 10.

isciplir	ne: Chemical Group: Atmo	spheric Pollution Su	b Group: A	mbient Air	ULR	No: TC40712	30000029	968F
		1	Shi	ft wise resu	ılts	,	Result in Avg.	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units		
	14		4031	4062	4063			
1	Particulate Matter PM ₁₀	IS-5182(Part-23):2017	52.4	55.8	49.3	μg / m³	52.5	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part-24):2019	21.6	24.6	19.5	μg / m³	21.9	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2):2017	11.1	12.6	9.9	μg / m³	11.2	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6):2017	19.2	19.7	16.7	μg / m³	18.5	80
5	Ozone as O ₃	IS 5182(part-9):2019	9.8	9.1	8.2	μg / m³	9.0	100
6	Lead	IS-5182(Part-22):2019	0.021	0.019	0.018	μg / m³	0.019	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.26	0.31	mg/m³	0.27	2
8	Ammonia as NH ₃	IS-5182(part-25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part-26):2020	1.38	1.35	1.31	μg / m³	1.35	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual: 2022	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Authorized Signatory

Hanumanthaiah. P **Technical Manager**

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Kallahalli Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5. **Date of Sample Receipt** 6.

23.06.2023 24.06.2023

24.06.2023

7. **Analysis Starting Date**

26.06.2023

Analysis Completion Date Report Issue Date

27.06.2023

Sampling Protocol

IS 5182: Part 14: 2019

Disci	pline: Cl	nemical Group: Atm	ospheric Pollution	Sub C	roup: An	bient Air	ULR No	: MSVAL/20	23/784
		_	TIT	Sh	ift wise re	esults		Result in	Tolerance
	S.No	.No Parameter	Protocols	1 2	2	3	Units	Avg.	limits
			Ç:	1429	1430	1431			
	11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
	12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Hanumanthaiah. P **Technical Manager**

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(Metal & Ferro Alloys Plant)

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

2. Name of the location Vysanakere Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

5. **Date of Monitoring** Date of Sample Receipt 23.06.2023

6. **Analysis Starting Date** 7.

24.06.2023 24.06.2023

8. **Analysis Completion Date** 26.06.2023 27.06.2023

Report Issue Date 9. **Sampling Protocol** 10.

IS 5182: Part 14: 2019

ULR No: TC407123000002969F Discipline: Chemical **Group: Atmospheric Pollution** Sub Group: Ambient Air

		401/	Shif	t wise resi	ılts		Result	Tolerance
S.No	Parameter	Protocols	1	2	3	Units	in Avg.	limits
	12.7	ACTIVITE	4064	4065	4066			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	49.3	56.5	49.7	μg / m³	51.8	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	17.4	24.8	20.2	μg / m³	20.8	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	10.2	12.3	10.4	$\mu g / m^3$	11.0	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	16	19.2	16.8	μg / m³	17.3	80
5	Ozone as O ₃	IS 5182(part-9):2019	9.7	8.9	8.1	μg / m³	8.9	100
6	Lead	IS-5182(Part-	0.021	0.018	0.016	μg / m³	0.018	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.35	0.26	0.30	mg/m³	0.30	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.40	1.32	1.30	μg / m³	1.34	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:	<0.01	<0.01	<0.01	μg / m³	<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 Hanumanthaiah. P **Technical Manager**

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of 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 location Vysanakere Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

5. **Date of Monitoring** 23.06.2023

Date of Sample Receipt

24.06.2023 24.06.2023

Analysis Starting Date 7. 8. **Analysis Completion Date**

26.06.2023

Report Issue Date

27.06.2023

9. **Sampling Protocol**

IS 5182: Part 14: 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/785

	Parameter	Protocols	Sh	Shift wise results			Result in	Tolerance
S.No			1	2	3	Units	Avg.	limits
			1432	1433	1434			
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	. 1

INFERENCE

As per NAAQS Standards

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Analysed by

Authorized Signatory

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TC-4071

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

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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 sampling Equipments

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

23.06.2023 24.06.2023

6. Date of Sample Receipt7. Analysis Starting Date

: 24.06.2023

8. Analysis Completion Date

: 26.06.2023

9. Report Issue Date 10. Sampling Protocol : 27.06.2023 : IS 5182 : Part 14 : 2019

ine: Cl	nemical Group: Atmosph	eric Pollution	Sub Group:	Ambient A	ır UL	R No: TC40	7123000	002970F
			Shif	ft wise res	ults		Dagula	Tolerance
S.No	Parameter	Protocols	1	2	3	Units	Result in Avg.	limits
			4067	4068	4069			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	66.2	70.2	65.4	μg / m³	67.3	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	26.8	28.8	24.6	μg / m³	26.7	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	11.6	12.8	10.8	μg / m³	11.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	12.5	12	10.9	μg / m³	11.8	80
5	Ozone as O ₃	IS 5182(part-9):2019	9 18.2	16.5	14.2	μg / m³	16.3	100
6	Lead	IS-5182(Part-	0.025	0.032	0.028	μg / m³	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.36	0.38	0.34	mg/m³	0.36	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	1.26	1.26	1.28	μg / m³	1.27	20
10	Arsenic as AS	MSVAL/SOP/A/009 As per CPCB Manual	-0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Analysed by

CAL LABORED BALLARI A STATE OF REPORT A STATE OF

Authorized Signatory

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

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

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(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Gunda Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5.

23.06.2023

6. **Date of Sample Receipt** 24.06.2023

Analysis Starting Date 7.

24.06.2023

Analysis Completion Date 8.

26.06.2023

Report Issue Date 9

27.06.2023

10. **Sampling Protocol** IS 5182: Part 14: 2019

Discipline: Chemical Group: Atmospheric Pollution Sub Group: Ambient Air

ULR No: MSVAL/2023/786

S.No	Parameter	SOL	Sh	ift wise re	sults		Result in Avg.	Tolerance
		Protocols	1	2	3	Units		limits
			1435	1436	1437			
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

As per NAAQS Standards **INFERENCE**

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

Analysed by

Authorized Signatory

Hanumanthaiah. P **Technical 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.

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

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



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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry 1.

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Smiore Colony

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5.

27.06.2023

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

28.06.2023 28.06.2023

Analysis Completion Date 8.

30.06.2023 01.07.2023

Report Issue Date 9. **Sampling Protocol**

IS 5182: Part 14: 2019

ULR No: TC407123000003238F Discipline: Chemical **Group: Atmospheric Pollution** Sub Group: Ambient Air

	and the same of th		Shit	ft wise resi	ults		D 1	m 1
S.No	Parameter	Protocols	1 1	2	3	Units	Result in Avg.	Tolerance limits
	100		4722	4723	4724			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	59.8	55.2	51.1	μg / m³	55.4	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	27.4	25.0	23.6	μg / m³	25.3	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2):2017	10.3	8.0	8.5	$\mu g / m^3$	8.9	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6):2017	20.2	18.4	17.8	$\mu g / m^3$	18.8	80
5	Ozone as O ₃	IS 5182(part-9):2019	12.8	9.4	8.2	μg / m³	10.1	100
6	Lead	IS-5182(Part- 22):2019	0.031	0.026	0.020	μg / m³	0.026	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.38	0.30	0.26	mg / m³	0.31	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	0.89	0.80	0.75	µg / m³	0.81	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual: 2022	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Authorized Signatory

Hanumanthaiah, P Technical 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, (0) : 9945456764, 08392-255169

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

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

: Smiore Colony

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

27.06.2023

6. Date of Sample Receipt

28.06.2023

7. Analysis Starting Date

28.06.2023

8. Analysis Completion Date

30.06.2023

9. Report Issue Date

01.07.2023

10. Sampling Protocol

IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0694

S.No	Parameter	Protocols	Sh	ift wise re	sults	Units	Result in Avg.	Tolerance
			1	2	3			limits
2			1262	1263	1264			ff-, .
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

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

58



(Certified by ISO 14001-2015, ISO 45001-2018, ISO 9001-2015, ISO 22000:2018)

NABL Accredited Laboratory

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



TC- 4071

MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location : Kallahalli Village

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

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

 5. Date of Monitoring
 : 27.06.2023

 6. Date of Sample Receipt
 : 28.06.2023

 7. Analysis Starting Date
 : 28.06.2023

8. Analysis Completion Date : 30.06.2023 9. Report Issue Date : 01.07.2023

10. Sampling Protocol : IS 5182 : Part 14 : 2019

isciplir	e: Chemical Group: Atmo	spheric Pollution Su	b Group: A	mbient Air	ULR	lo: TC40712	30000032	239F
		100	Shi	ft wise resu	ılts		nits Result in Avg.	Tolerance limits
S.No	Parameter	Protocols	1	2	3	Units		
	93		4725	4726	4727			
1	Particulate Matter PM ₁₀	IS-5182(Part-23):2017	56.8	60.5	51.6	μg / m³	56.3	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part-24):2019	17.8	21.2	14.6	μg / m³	17.9	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2):2017	9	11.2	7.5	μg / m³	9.2	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6):2017	11.7	13.8	10.1	μg / m³	11.9	80
5	Ozone as O ₃	IS 5182(part-9):2019	14.2	15.6	13.4	μg / m³	14.4	100
6	Lead	IS-5182(Part-22):2019	0.038	0.042	0.031	μg / m³	0.037	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.13	0.18	0.10	mg / m³	0.14	2
8	Ammonia as NH ₃	IS-5182(part-25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part-26):2020	0.40	0.54	0.38	μg / m³	0.44	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual: 2022	<0.01	<0.01	<0.01	μg / m³	<0.01	6

INFERENCE A

As per NAAQS Standards

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

Analysed by

END OF REPORTS

Authorized Signatory

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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring

27.06.2023

6. Date of Sample Receipt

28.06.2023

7. Analysis Starting Date

28.06.2023

8. Analysis Completion Date

30.06.2023

9. Report Issue Date 10. Sampling Protocol 01.07.2023 IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0695

Pilite. Cil	ic. dicinical di oup. Atmospherie i onucion		Dub u	roup. min	OTCHE THE	OBICHO: MOTRE/ EUES/ 0075			
S.No	Parameter	Protocols	Sh	ift wise re	esults		Result in	Tolerance	
			1	2	3	Units	Avg.	limits	
			1265	1266	1267				
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5	
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	. 1	

INFERENCE

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

Analysed by

TOTAL LAND

Authorized Signatory

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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Vysanakere Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Monitoring 5.

27.06.2023 28.06.2023

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

28.06.2023

Analysis Completion Date 8.

30.06.2023

Report Issue Date 9.

01.07.2023

Sampling Protocol 10.

IS 5182: Part 14: 2019

	not l		Shift wise results				Result in Avg.	Tolerance
S.No	Parameter	Protocols	1 2 3	Units	limits			
	37.1	17 / 1	4728	4729	4730			
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	49.8	52.5	43.9	μg / m³	48.7	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	19.8	21.6	17.2	μg / m³	19.5	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	9.1	10.5	7.8	μg / m³	9.1	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	13.4	14.8	11.3	μg / m³	13.2	80
5	Ozone as O ₃	IS 5182(part-9):2019	11.1	12.4	10.6	$\mu g / m^3$	11.4	100
6	Lead	IS-5182(Part-	0.021	0.026	0.019	μg / m³	0.022	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.19	0.24	0.16	mg/m³	0.20	2
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	0.14	0.53	0.38	μg / m³	0.35	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:		<0.01	<0.01	μg / m³	<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

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

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Vysanakere Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

Particulars of the sampling Equipments 4.

Sample collected with RDS APM460 and FDS GTI-131

Sub Group: Ambient Air

Date of Monitoring Date of Sample Receipt 6.

27.06.2023 28.06.2023

7. **Analysis Starting Date**

28.06.2023

8. **Analysis Completion Date**

30.06.2023

9. **Report Issue Date** 10.

01.07.2023

Sampling Protocol

Discipline: Chemical

IS 5182: Part 14: 2019

ULR No: MSVAL/2023/0696

	1 2	Shift wise results		esults		Result in	Tolorongo	
S.No	Parameter	Protocols	1	2	3	Units	Avg.	Tolerance limits
	7.0		1268	1269	1270			
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

Group: Atmospheric Pollution

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

Analysed by

Authorized Signatory

Hanumanthaiah, P **Technical Manager**

^{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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NABL Accredited Laboratory

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MSVAL/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of 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 location

Gunda Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

27.06.2023 28.06.2023

7. Analysis Starting Date

28.06.2023

8. Analysis Completion Date

: 30.06.2023

9. Report Issue Date

: 01.07.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

cipline: C	hemical Group: Atmosph	eric Pollution Su	b Group:	Ambient A	ir UL	R No: TC407123000003241F		
			Shif	ft wise resi	ılts	Units	Result in Avg.	Tolerance limits
S.No	Parameter	Protocols	1	2	3			
			4731	4732	4733		J	<
1	Particulate Matter PM ₁₀	IS-5182(Part- 23):2017	47.1	52.5	43.9	$\mu g / m^3$	47.8	100
2	Particulate Matter or PM _{2.5}	IS-5182(Part- 24):2019	18.4	21.5	17.4	μg / m³	19.1	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-	9.4	10.9	7.8	μg / m³	9.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part- 6):2017	15.6	19.1	14.2	μg / m³	16.3	80
5	Ozone as O ₃	IS 5182(part-9):2019	8.90	9.02	8.11	μg / m³	8.7	100
6	Lead	IS-5182(Part- 22):2019	0.019	0.023	0.011	μg / m³	0.018	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.15	0.19	0.13	mg/m³	0.16	2 .
8	Ammonia as NH ₃	IS-5182(part- 25):2018	<0.01	<0.01	<0.01	µg / m³	<0.01	400
9	Nickel as Ni	IS-5182(part- 26):2020	0.43	0.56	0.35	μg / m³	0.45	20
10	Arsenic as AS	MSVAL/SOP/A/009 - As per CPCB Manual:	<0.01	<0.01	<0.01	μg / m³	<0.01	. 6

INFERENCE

As per NAAQS Standards

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

Analysed by

TO A S31

Authorized Signatory

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/AA/RF/01/00

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1. Name and Address of Industry

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

(Metal & Ferro Alloys Plant)

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

. Name of the location

Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sampling Equipments

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Monitoring6. Date of Sample Receipt

: 27.06.2023 : 28.06.2023

7. Analysis Starting Date

: 28.06.2023

8. Analysis Completion Date9. Report Issue Date

: 30.06.2023 : 01.07.2023

10. Sampling Protocol

: IS 5182 : Part 14 : 2019

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Ambient Air

ULR No: MSVAL/2023/0697

		Shift wise results		esults		Result in	Tolerance	
S.No	Parameter	Protocols	1	2	3	Units	Avg.	limits
	, <u>T</u>		1271	1272	1273	1		
11	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	μg / m³	<0.01	5
12	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	μg / m³	<0.01	1

INFERENCE

As per NAAQS Standards

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

Analysed by

Authorized Signatory

Hanumanthaiah. P Technical Manager

^{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.



(Certified by ISO 14001-2015, ISO 45001-2018, ISO 9001-2015, ISO 22000:2018)

NABL Accredited Laboratory

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

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

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



MSVAL/SE/RF/01/00

ANALYSIS REPORT FOR SOURCE EMMISSION

1. Name and Address of the

Industry

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

(Metal & Ferro Alloys Plant)

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

2. Stack ID

Coke Screening& Store

3. Sample Collected By

MSV Analytical Laboratories, Bellary

4. Date of Monitoring5. Date of Sample Receipt

09.06.2023

5. Date of Sample Receip6. Sample Code

10.06.2023 2513

7. Analysis Starting Date8. Analysis Completion Date

10.06.2023 16.06.2023

9. Report Issue date

17.06.2023

Discipline: Chemical

Group: Atmospheric Pollution Sub Group: Stack emission GENERAL DETAILS

ULR No: TC407123000001793F

Instrument Used for Sampling	Sample collected with VSS _1
Fuel Used	\2
Ambient Temperature (°C)	34
Stack Temperature (°C)	50
Velocity (m/s)	5.4
Height (m)	15 mtrs AGL
Diameter (m)	0.7
Cross sectional area (m²)	0.3850

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS 11255 (Part-1): 2019	mg/Nm³	33.4	50

INFERENCE

As per GSR 277 (E) Standards,

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

Analysed by

BALLARI PIC

Authorized Signatory

Hanumanthaiah. P Technical Manager

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

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MSVAL/SE/RF/01/00

ANALYSIS REPORT FOR SOURCE EMMISSION

Name and Address of the

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

Industry

(Metal & Ferro Alloys Plant)

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

2. Stack ID Coke Cutter

Sample Collected By 3.

MSV Analytical Laboratories, Bellary

Date of Monitoring Date of Sample Receipt 09.06.2023

5.

10.06.2023

Sample Code

2514

7. **Analysis Starting Date** 10.06.2023

Analysis Completion Date 8.

16.06.2023

Report Issue date

17.06.2023

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Stack emission

ULR No: TC407123000001794F

GENERAL DETAILS

Instrument Used for Sampling	Sample collected with VSS _1
Fuel Used	
Ambient Temperature (°C)	36
Stack Temperature (°C)	60
Velocity (m/s)	5.3
Height (m)	15 mtrs AGL
Diameter (m)	0.7
Cross sectional area (m²)	0.3850

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS 11255 (Part-1): 2019	mg/Nm³	32.4	50

INFERENCE

As per GSR 277 (E) Standards.

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

Analysed by

Authorized Signatory

Hanumanthaiah. P **Technical 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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ANALYSIS REPORT FOR SOURCE EMMISSION

Name and Address 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 Coal Crushing Area

Sample Collected By

MSV Analytical Laboratories, Bellary

Date of Monitoring 4.

09.06.2023

Date of Sample Receipt

10.06.2023

Sample Code 6.

2515

Analysis Starting Date Analysis Completion Date 10.06.2023

8. Report Issue date 16.06.2023 17.06.2023

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Stack emission

ULR No: TC407123000001795F

GENERAL DETAILS

Instrument Used for Sampling	Sample collected with VSS _1
Fuel Used	
Ambient Temperature (°C)	33
Stack Temperature (°C)	50
Velocity (m/s)	5.3
Height (m)	15 mtrs AGL
Diameter (m)	0.75
Cross sectional area (m²)	0.4419

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS 11255 (Part-1): 2019	mg/Nm³	29.1	50

INFERENCE

As per GSR 277 (E) Standards,

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

Analysed by

Authorized Signatory

Hanumanthaiah. P **Technical Manager**

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

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MSVAL/SE/RF/01/00

ANALYSIS REPORT FOR SOURCE EMMISSION

1. Name and Address 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. Date of Monitoring

01.06.2023

5. Date of Sample Receipt6. Sample Code

02.06.2023 1895

7. Analysis Starting Date

02.06.2023

8. Analysis Completion Date

09.06.2<mark>023</mark> 10.06.2023

9. Report Issue date

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Stack emission

ULR No: TC407123000001431F

GENERAL DETAILS

Instrument Used for Sampling	Sample collected with VSS _1
Fuel Used	1/7
Ambient Temperature (°C)	34
Stack Temperature (°C)	105
Velocity (m/s)	6.1
Height (m)	35 mtrs AGL
Diameter (m)	2.5
Cross sectional area (m²)	4.9109

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Rate of discharge	IS-11255(Part-3) - 2013	Nm³/hr	118341.624	
Particulate Matter	IS-11255(Part-1) - 2019	mg/Nm³	35.7	150
Sulphur dioxide	IS-11255(Part-2) - 2019	mg/Nm³	20.3	
Nitrogen dioxide	IS-11255(Part-7) - 2017	mg/Nm ³	28.7	
Oxygen	IS 13270 (Orsat Apparatus USEPA 3A:1989): 2019	%	4.21	

INFERENCE

As per GSR 277 (E) Standards,

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

Analysed by

Authorized Signatory

Hanumanthaiah. P Technical Manager

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

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Email: labmsy@gmail.com. msyalbellary2018@gmail.com. msy.lab01@gmail.com Web ID: www.msyalbellary.com



TC- 407

MSVAL/SE/RF/01/00

ANALYSIS REPORT FOR SOURCE EMMISSION

1. Name and Address of the

Industry

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

(Metal & Ferro Alloys Plant)

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

2. Stack ID

: Ferro Alloy Arc Furnace 3

Sample Collected By
 Date of Monitoring

MSV Analytical Laboratories, Bellary

4. Date of Monitoring
5. Date of Sample Receipt

09.06.2023 10.06.2023 2516

6. Sample Code
7. Analysis Starting Date

10.06.2023 16.06.2023

8. Analysis Completion Date9. Report Issue date

16.06.2023 17.06.2023

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Stack emission

ULR No: TC407123000001796F

GENERAL DETAILS

Instrument Used for Sampling	Sample collected with VSS_1		
Fuel Used			
Ambient Temperature (°C)	34		
Stack Temperature (°C)	110		
Velocity (m/s)	6.3		
Height (m)	35 mtrs AGL		
Diameter (m)	2.5		
Cross sectional area (m²)	4.9109		

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Rate of discharge	IS-11255(Part-3) - 2013	Nm³/hr	114826.02	
Particulate Matter	IS-11255(Part-1) - 2019	mg/Nm³	37.1	150
Sulphur dioxide	IS-11255(Part-2) - 2019	mg/Nm³	21.4	
Nitrogen dioxide	IS-11255(Part-7) - 2017	mg/Nm³	30.2	
Oxygen	IS 13270 (Orsat Apparatus USEPA 3A:1989): 2019	%	5.21	

INFERENCE

As per GSR 277 (E) Standards,

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

Analysed by

Authorized Signatory

Hanumanthaiah. P Technical Manager

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

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MSVAL/SE/RF/01/00

ANALYSIS REPORT FOR SOURCE EMMISSION

Name and Address of the Industry

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

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village,

Stack ID

Hospet Taluk, Bellary District, Karnataka. Coke Oven Battery - Passes Through WHRB-1

Sample Collected By 3.

MSV Analytical Laboratories, Bellary

Date of Monitoring

01.06.2023

Date of Sample Receipt 5.

02.06.2023

Sample Code

1893 02.06.2023

Analysis Starting Date 7. 8. **Analysis Completion Date**

08.06.2023

Report Issue date

09.06.2023

Discipline: Chemical

Group: Atmospheric Pollution Sub Group: Stack emission **GENERAL DETAILS**

ULR No: TC407123000001432F

Instrument Used for Sampling	Sample collected with VSS _1		
Fuel Used			
Ambient Temperature (°C)	36		
Stack Temperature (°C)	130		
Velocity (m/s)	6.3		
Height (m)	60 mtrs AGL		
Diameter (m)	4.6		
Cross sectional area (m²)	16.62647		

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Rate of discharge	IS-11255(Part-3) - 2013	Nm³/hr	47521.3241	
Particulate Matter	IS-11255(Part-1) - 2019	mg/Nm ³	24.1	50
Sulphur dioxide	IS-11255(Part-2) - 2019	mg/Nm ³	33.8	800
Nitrogen dioxide	IS-11255(Part-7) - 2017	mg/Nm³	48.4	500
Oxygen	IS 13270	%	6.1	
Carbon Monoxide	(Orsat Apparatus USEPA 3A:1989): 2019	%	0.31	Max 1%

INFERENCE

As per GSR 277 (E) Standards,

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

Analysed by

Authorized Signatory

Hanumanthaiah. P Technical Manager



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

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MSVAL/SE/RF/01/00

ANALYSIS REPORT FOR SOURCE EMMISSION

1. Name and Address of the Industry

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

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

2. Stack ID

Hospet Taluk, Bellary District, Karnataka. Coke Oven Battery – Passes Through WHRB-2

Sample Collected By
 Date of Monitoring

MSV Analytical Laboratories, Bellary

5. Date of Monitoring
6. Sample Code

01.06.2023 02.06.2023

6. Sample Code7. Analysis Starting Date

1894 02.06.2023

8. Analysis Completion Date9. Report Issue date

08.06.2023 09.06.2023

Discipline: Chemical

Group: Atmospheric Pollution Sub Group: Stack emission

GENERAL DETAILS

ULR No: TC407123000001433F

Instrument Used for Sampling	Sample collected with VSS _1		
Fuel Used			
Ambient Temperature (°C)	35		
Stack Temperature (°C)	135		
Velocity (m/s)	6.5		
Height (m)	60 mtrs AGL		
Diameter (m)	4.6		
Cross sectional area (m ²)	16.62647		

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Rate of discharge	IS-11255(Part-3) - 2013	Nm³/hr	432841.3264	
Particulate Matter	IS-11255(Part-1) - 2019	mg/Nm³	26.2	50
Sulphur dioxide	IS-11255(Part-2) - 2019	mg/Nm³	35.1	800
Nitrogen dioxide	IS-11255(Part-7) - 2017	mg/Nm³	46.4	500
Oxygen	IS 13270	%	5.8	
Carbon Monoxide	(Orsat Apparatus USEPA 3A:1989): 2019	%	0.33	Max 1%

INFERENCE As per GSR 277 (E) Standards,

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

Analysed by

NA STATE OF THE PARTY OF THE PA

Authorized Signatory

Hanumanthaiah. P Technical Manager

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MSVAL/SE/RF/01/00

ANALYSIS REPORT FOR SOURCE EMMISSION

1. Name and Address 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

DG Set 750 KVA

3. Sample Collected By

MSV Analytical Laboratories, Bellary

4. Date of Monitoring

01.06.2023

5. Date of Sample Receipt6. Sample Code

02.06.2023 1895

7. Analysis Starting Date

02.06.2023

Analysis Completion Date
 Report Issue date

08.06.2023 09.06.2023

Discipline: Chemical

Group: Atmospheric Pollution

Sub Group: Stack emission

ULR No: TC4071230000001434F

GENERAL DETAILS

Instrument Used for Sampling	Sample collected with VSS _		
Fuel Used	And I have been a second		
Ambient Temperature (°C)	30		
Stack Temperature (°C)	56		
Velocity (m/s)	5.9		
Height (m)	15 mtrs AGL		
Diameter (m)	0.3		
Cross sectional area (m²)	0.0707		

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part-1) - 2019	mg/Nm³	38.7	100
Sulphur dioxide	IS-11255(Part-2) - 2019	mg/Nm³	25.6	50
Nitrogen dioxide	IS-11255(Part-7) - 2017	mg/Nm³	30.1	50

INFERENCE

As per GSR 277 (E) Standards,

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

Analysed by

RICAL LAND **Authorized Signatory**

Hanumanthaiah. P Technical Manager

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

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MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC407123000003150F

Report Issued Date: 01.07.2023

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. Surface water - Tungabhadra Reservoir

Name of the sample 2. MSV Analytical Laboratories Sample Collected By 3.

Sample Quantity 2 Liters 4.

Sample Description/condition Good/Satisfactory 5. 26.06.2023

Date of Sampling 6. 4772 Sample Code 7.

Date of Sample Receipt 26.06.2023 8. **Analysis Starting Date** 27.06.2023 9. **Analysis Completion date** 01.07.2023 10.

Sample tested As Received Standards as per IS Result Protocol Unit **Parameters** S.No - 2296 Physical parameters Agreeable IS: 3025(part-7) Agreeable Taste 1 IS: 3025(part-4) 10 <1 2 Color Un objectionable Un IS: 3025(part-5) 3 Odor objectionable IS: 3025(part-11) 7.23 pН 6.5-8.5 4 IS-3025 (part 14) 748 Conductivity μs/cm 5 Chemical parameters 442 500 Total Dissolved Solids IS: 3025(part-16) mg/l 6 21.3 80.10 Calcium as Ca IS: 3025(part-40) 7 mg/l 141.8 300 Total Hardness as CaCO₃ IS: 3025(part-21) mg/l 8 IS: 3025(part-46) 31.8 24.28 Magnesium as Mg mg/l 9 IS: 3025(part-39) Nil 10 Oil &Grease mg/l APHA 23 rd EDITION - 5520 C 0.01 Nil Mineral Oil mg/l 11 400 Sulphate as SO₄ IS: 3025(part-24) mg/l 64.8 12 IS: 3025(part-32) 108.9 250 mg/l 13 Chloride as Cl IS: 3025(part-34) 3.41 20 Nitrate as NO₃ mg/l 14 IS: 3025(part-53) 0.004 0.3 Iron as Fe mg/l 15 IS: 3025(part-60) 0.26 1.50 Fluoride as F mg/l 16 Bio-chemical Oxygen Demand (3 Nil 2 IS 3025 (Part 44): 1993 mg/l 17 days at 27°C), Max IS 3025 (Part 38): 1993 6.84 Min 6 18 Dissolved Oxygen mg/l LAB SOP Nil 19 Free CO2 mg/l LAB SOP mg/l Nil ---20 Free Ammonia

IS - 2296 Standards, BDL - Below Detectable Limit INFERENCE Report Status: - The above parameters are within limits.

Analysed by

Authorized Signatory

Ramana Gouda Senior Chemist

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

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

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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/0842

Report Issued Date: 01.07.2023

Name of the Industry 1.

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

(Metal & Ferro Alloys Plant)

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

Name of the sample 2.

Surface water - Tungabhadra Reservoir

Sample Collected By 3.

MSV Analytical Laboratories

4. Sample Quantity 2 Liters

Sample Description/condition 5. **Date of Sampling**

Good/Satisfactory

6.

26.06.2023

Sample Code 7.

4773

Date of Sample Receipt 8. 9. **Analysis Starting Date**

26.06.2023 27.06.2023

Analysis Completion date 10.

01.07.2023

Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296		
1	Chemical parameters						
21	Manganese as Mn	APHA 23 rd EDITION -3111 B	mg/l	0.016	0.5		
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.024	15		
23	Boron as B	APHA 23 rd EDITION -4500 B	mg/l	Nil			
24	Barium as Ba	APHA 23 rd EDITION -3500 Ba	mg/l	0.003	1.0		
25	Silver as Ag	APHA 23 rd EDITION -3500 Ag	mg/l	< 0.001	0.05		
26	Arsenic as As	APHA 23 rdEDITION -3112 B	mg/l	< 0.002	0.05		
27	Mercury as Hg	APHA 23rd EDITION -3112 B	mg/l	< 0.001	0.001		
28	Lead as Pb	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.1		
29	Cadmium as Cd	APHA 23 rd EDITION -3111 B	mg/l	< 0.001	0.01		
30	Chromium as Cr	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.05		
31	Selenium as Se	APHA 23 rd EDITION -3500 B	mg/l	< 0.001	0.01		
32	Cyanide as CN	APHA 23 rd EDITION -4500 D	mg/l	Nil	0.05		
33	Phenols	IS: 3025(part-43)	mg/l	Nil	0.002		
34	Anionic Detergents as MBAS	IS: 13428-2005	mg/l	<0.1	0.2		
35	Percent Sodium	LAB SOP	%	21.44	/		
36	Sodium Absorption Ratio	LAB SOP	mg/l	11.1			

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

Report Status: - The above parameters are within limits.

Analysed by

Authorized Signatory

Ramana Gouda **Senior Chemist**

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/18/03

Report Issued Date: 01.07.2023

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: TC407123000003151F

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

(Metal & Ferro Alloys Plant)

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

Surface water - Tungabhadra Reservoir MSV Analytical Laboratories, Bellary.

250 ml (Sterilized Bottle)

Good/satisfactory

26.06.2023

4774

26.06.2023 27.06.2023

01.07.2023

10. Analysis Completion Date 11. Sample tested as Received

8. Date of sample Receipt

9. Analysis Starting Date

1. Name of the Industry

3. Sample Collected By

4. Sample Quantity

6. Date of sampling 7. Sample Code

2. Sample Type

5. Sample description/condition

RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS - 2296
Total Coliform	IS 1622:1981	MPN/100 ml	14	50

IS - 2296 Standards, BDL - Below Detectable Limit **INFERENCE** Report Status: - The above parameters are within limits.

Analysed by

Authorized Signatory

Eshwari Sr.Microbiologist

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



MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC407123000003152F Report Issued Date: 30.03.2023 M/s. The Sandur Manganese & Iron Ores Ltd. Name of the Industry 1.

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka. Surface water - Canal Near Vysanakere

2. Name of the sample MSV Analytical Laboratories Sample Collected By 3.

Sample Quantity 2 Liters

4.

Sample Description/condition Good/Satisfactory 5. Date of Sampling 26.06.2023 6.

7. Sample Code 4775

Date of Sample Receipt 26.06.2023 8. **Analysis Starting Date** 27.06.2023 9. **Analysis Completion date** 01.07.2023 10.

Sample tested As Received

	Sample tested As Recei	iveu	SV		Ctll
S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
		Physical parameter	S		
1	Taste	IS: 3025(part-7)		Agreeable	Agreeable
2	Color	IS: 3025(part-4)	·	<5	10
3	Odor	IS: 3025(part-5)) (L	Un objectionable	Un objectionable
4	pH	IS: 3025(part-11)	()	7.64	6.5-8.5
5	Conductivity	IS-3025 (part 14)	μs/cm	760	
	80	Chemical parameter	rs	4	
6	Total Dissolved Solids	IS: 3025(part-16)	mg/l	418	500
7	Calcium as Ca	IS: 3025(part-40)	mg/l	21.2	80.10
8	Total Hardness as CaCO ₃	IS: 3025(part-21)	mg/l	86.8	300
9	Magnesium as Mg	IS: 3025(part-46)	mg/l	8.21	24.28
10	Oil &Grease	IS: 3025(part-39)	mg/l	Nil	
11	Mineral Oil	APHA 23 rd EDITION - 5520 C	mg/l	Nil	0.01
12	Sulphate as SO ₄	IS: 3025(part-24)	mg/l	64.7	400
13	Chloride as Cl	IS: 3025(part-32)	mg/l	84.9	250
14	Nitrate as NO ₃	IS: 3025(part-34)	mg/l	0.62	20
15	Iron as Fe	IS: 3025(part-53)	mg/l	0.002	0.3
16	Fluoride as F	IS: 3025(part-60)	mg/l	0.48	1.50
17	Bio-chemical Oxygen Demand (3 days at 27°C), Max	IS 3025 (Part 44): 1993	mg/l	Nil	2
18	Dissolved Oxygen	IS 3025 (Part 38): 1993	mg/l	7.6	Min 6
19	Free CO2	LAB SOP	mg/l	Nil	
20	Free Ammonia	LAB SOP	mg/l	Nil	

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit Report Status: - The above parameters are within limits.

Analysed by

Authorized Signatory Ramana Gouda **Senior Chemist**

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.



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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/0843

Report Issued Date: 30.03.2023

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

Surface water - Canal Near Vysanakere

3. Sample Collected By

MSV Analytical Laboratories 2 Liters

4. Sample Quantity5. Sample Description/condition

Good/Satisfactory

6. Date of Sampling

26.06.2023

7. Sample Code

10.

4776 26.06.2023

8. Date of Sample Receipt9. Analysis Starting Date

: 27.06.2023 : 01.07.2023

Analysis Completion date Sample tested As Received

	Sample tested As	Received	A SURVEY		
S.No	Parameters	Protocol	Unit	Result	Standards as per IS – 2296
		Chemical parameters	5		
21	Manganese as Mn	APHA 23 rd EDITION -3111 B	mg/l	0.010	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.022	15
23	Boron as B	APHA 23 rd EDITION -4500 B	mg/l	Nil	
24	Barium as Ba	APHA 23 rd EDITION -3500 Ba	mg/l	0.002	1.0
25	Silver as Ag	APHA 23 rd EDITION -3500 Ag	mg/l	< 0.001	0.05
26	Arsenic as As	APHA 23 rdEDITION -3112 B	mg/l	< 0.002	0.05
27	Mercury as Hg	APHA 23rd EDITION -3112 B	mg/l	< 0.001	0.001
28	Lead as Pb	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.1
29	Cadmium as Cd	APHA 23 rd EDITION -3111 B	mg/l	< 0.001	0.01
30	Chromium as Cr	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.05
31	Selenium as Se	APHA 23 rd EDITION -3500 B	mg/l	< 0.001	0.01
32	Cyanide as CN	APHA 23 rd EDITION -4500 D	mg/l	Nil	0.05
33	Phenols	IS: 3025(part-43)	mg/l	Nil	0.002
34	Anionic Detergents as MBAS	IS: 13428-2005	mg/l	<0.1	0.2
35	Percent Sodium	LAB SOP	%	20.6	
36	Sodium Absorption Ratio	LAB SOP	mg/l	11.3	

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit Report Status: - The above parameters are within limits.

Analysed by

Authorized Signatory

Ramana Gouda Senior Chemist

-: END OF RE

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 after 1 month 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: labmsy@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID: www.msvalbellary.com



MSVAL/A/F/18/03

Report Issued Date: 30.03.2023

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: TC407123000003153F

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

(Metal & Ferro Alloys Plant)

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

: Surface water - Canal Near Vysanakere

: MSV Analytical Laboratories, Bellary.

: 250 ml (Sterilized Bottle)

: Good/satisfactory

: 26.06.2023

: 4777

: 26.06.2023

: 27.06.2023 : 01.07.2023

10. Analysis Completion Date11. Sample tested as Received

8. Date of sample Receipt

9. Analysis Starting Date

5. Sample description/condition

Name of the Industry

2. Sample Type

3. Sample Collected By

4. Sample Quantity

6. Date of Sampling

7. Sample Code

RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS - 2296
Total Coliform	IS 1622:1981	MPN/100 ml	18	50

INFERENCE	IS - 2296 Standards, BDL - Below Detectable Limit	
	Report Status: - The above parameters are within limits.	

Analysed by

Authorized Signatory

Eshwari

Sr.Microbiologist

-: END OF PERDRE

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: labmsy@gmail.com, msyalbellary2018@gmail.com, msy.lab01@gmail.com Web ID: www.msyalbellary.com



MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC407123000003154F

Report Issued Date: 01.07.2023

1. Name of the Industry M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Allovs Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka. Surface water - Dhananayakana Kere Water

2. Name of the sample Sample Collected By 3.

MSV Analytical Laboratories

mg/l

mg/l

mg/l

mg/l

mg/l

mg/l

mg/l

Sample Quantity 4.

2 Liters

Sample Description/condition 5.

Good/Satisfactory 26.06.2023

Date of Sampling 6. 7. Sample Code

4778

Date of Sample Receipt 8.

26.06.2023

9. **Analysis Starting Date Analysis Completion date** 10.

27.06.2023 01.07.2023

Sample tested As Received

Standards as per **Protocol** Unit Result S.No **Parameters** IS - 2296 Physical parameters Agreeable Agreeable IS: 3025(part-7) Taste 1 IS: 3025(part-4) <5 10 2 Color Un Un IS: 3025(part-5) 3 Odor objectionable objectionable IS: 3025(part-11) 7.42 6.5-8.5 4 рН 768 IS-3025 (part 14) μs/cm 5 Conductivity **Chemical parameters** Total Dissolved Solids IS: 3025(part-16) 410 500 6 mg/l 35.8 80.10 IS: 3025(part-40) 7 Calcium as Ca mg/l 300 102.4 Total Hardness as CaCO₃ IS: 3025(part-21) 8 mg/l 9 Magnesium as Mg IS: 3025(part-46) mg/l 3.13 24.28 IS: 3025(part-39) Nil Oil &Grease mg/l 10 Mineral Oil APHA 23 rd EDITION -11 mg/l Nil 0.01 5520 C 102.6 400 12 IS: 3025(part-24) mg/l Sulphate as SO₄ 250 IS: 3025(part-32) 141.9 13 Chloride as Cl mg/l 20 IS: 3025(part-34) 2.12

IS: 3025(part-53)

IS: 3025(part-60)

IS 3025 (Part 44): 1993

IS 3025 (Part 38): 1993

LAB SOP

LAB SOP

INFERENCE	IS - 2296 Standards, BDL - Below Detectable Limit
	Report Status: - The above parameters are within limits.

Analysed by

Bio-chemical Oxygen Demand

(3 days at 27°C), Max

Dissolved Oxygen

Free Ammonia

Nitrate as NO₃

Fluoride as F

Iron as Fe

Free CO2

14

15

16

17

18

19

20

Authorized Signatory Ramana Couda Senior Chemist

0.3

1.50

2

Min 6

0.002

0.42

Nil

6.26

Nil

Nil

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

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

-: END OF

^{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.

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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/0844

Report Issued Date: 01.07.2023

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.

Name of the sample
 Sample Collected By

Surface water - Dhananayakana Kere Water

3. Sample Collected By

MSV Analytical Laboratories

4. Sample Quantity

2 Liters

5. Sample Description/condition

Good/Satisfactory 26.06.2023

6. Date of Sampling

4779

7. Sample Code8. Date of Sample

26.06.2023

8. Date of Sample Receipt9. Analysis Starting Date

27.06.2023

10. Analysis Completion date

01.07.2023

Sample tested As Received

	Sample tested as Received						
S.No	Parameters	Protocol	Unit	Result	Standards as per IS – 2296		
		Chemical parameters	s /				
21	Manganese as Mn	APHA 23 rd EDITION -3111 B	mg/l	0.014	0.5		
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.016	15		
23	Boron as B	APHA 23 rd EDITION -4500 B	mg/l	Nil			
24	Barium as Ba	APHA 23 rd EDITION -3500 Ba	mg/l	0.002	1.0		
25	Silver as Ag	APHA 23 rd EDITION -3500 Ag	mg/l	< 0.001	0.05		
26	Arsenic as As	APHA 23 rdEDITION -3112 B	mg/l	< 0.002	0.05		
27	Mercury as Hg	APHA 23rd EDITION -3112 B	mg/l	< 0.001	0.001		
28	Lead as Pb	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.1		
29	Cadmium as Cd	APHA 23 rd EDITION -3111 B	mg/l	< 0.001	0.01		
30	Chromium as Cr	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.05		
31	Selenium as Se	APHA 23 rd EDITION -3500 B	mg/l	< 0.001	0.01		
32	Cyanide as CN	APHA 23 rd EDITION -4500 D	mg/l	Nil	0.05		
33	Phenols	IS: 3025(part-43)	mg/l	Nil	0.002		
34	Anionic Detergents as MBAS	IS: 13428-2005	mg/l	<0.1	0.2		
35	Percent Sodium	LAB SOP	%	24.2	/		
36	Sodium Absorption Ratio	LAB SOP	mg/l	11.3			

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

Report Status: - The above parameters are within limits.

Analysed by

Authorized Signatory

Ramana Gouda Senior Chemist

-: END OF RER

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.



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: TC407123000003155F

Report Issued Date: 01.07.2023

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

: Surface water - Dhananayakana Kere Water

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Sample Quantity

250 ml (Sterilized Bottle)

5. Sample description/condition

: Good/satisfactory

6. Date of Sampling

26.06.2023

7. Sample Code

4780

7. Sample Code 8. Date of sample Receipt

26.06.2023

9. Analysis Starting Date

: 27.06.2023

10. Analysis Completion Date

01.07.2023

11. Sample tested as Received

RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS – 2296
Total Coliform	IS 1622:1981	MPN/100 ml	14	50

INFERENCE IS – 2296 Standards, BDL – Below Detectable Limit
Report Status: - The above parameters are within limits.

Analysed by
18 hwetton G

Authorized Signatory

Eshwari

Sr.Microbiologist



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

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

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

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



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



MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC407123000003156F

Report Issued Date: 01.07.2023

Name of the Industry

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

Vyasanakere, Hanumanahalli Village,

Hospet Taluk, Bellary District, Karnataka.

2. Name of the sample Sample Collected By 3.

Surface water - Water body near Narayadevarakere MSV Analytical Laboratories

Sample Quantity 4.

2 Liters

Sample Description/condition 5.

Good/Satisfactory 26.06.2023

Date of Sampling 6. 7. Sample Code

4781

Date of Sample Receipt 8.

26.06.2023

9. **Analysis Starting Date Analysis Completion date** 10.

27.06.2023 01.07.2023

Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
		Physical parameter	S		3 35
1	Taste	IS: 3025(part-7)		Agreeable	Agreeable
2	Color	IS: 3025(part-4)	h	< 5	10
3	Odor	IS: 3025(part-5)	0	Un objectionable	Un objectionable
4	pH	IS: 3025(part-11)	V7. 3	7.42	6.5-8.5
5	Conductivity	IS-3025 (part 14)	μs/cm	648	
	双()	Chemical parameter	rs	1	
6	Total Dissolved Solids	IS: 3025(part-16)	mg/l	418	500
7	Calcium as Ca	IS: 3025(part-40)	mg/l	38.4	80.10
8	Total Hardness as CaCO ₃	IS: 3025(part-21)	mg/l	151.2	300
9	Magnesium as Mg	IS: 3025(part-46)	mg/l	13.5	24.28
10	Oil &Grease	IS: 3025(part-39)	mg/l	Nil	
11	Mineral Oil	APHA 23 rd EDITION - 5520 C	mg/l	Nil	0.01
12	Sulphate as SO ₄	IS: 3025(part-24)	mg/l	61.2	400
13	Chloride as Cl	IS: 3025(part-32)	mg/l	131.9	250
14	Nitrate as NO ₃	IS: 3025(part-34)	mg/l	1.24	20
15	Iron as Fe	IS: 3025(part-53)	mg/l	0.004	0.3
16	Fluoride as F	IS: 3025(part-60)	mg/l	0.34	1.50
17	Bio-chemical Oxygen Demand (3 days at 27°C), Max	IS 3025 (Part 44): 1993	mg/l	Nil	2
18	Dissolved Oxygen	IS 3025 (Part 38): 1993	mg/l	6.72	Min 6
19	Free CO2	LAB SOP	mg/l	Nil	
20	Free Ammonia	LAB SOP	mg/l	Nil	

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit Report Status: - The above parameters are within limits.

Analysed by

Authorized Signatory Rangana Gouda Senior Chemist

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

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

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

^{2.} Water samples will destroyed after 10days, 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.

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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/0845

Report Issued Date: 01.07.2023

Name of the Industry 1.

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

(Metal & Ferro Alloys Plant)

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

2. Name of the sample Surface water - Water body near

Naravadevarakere

3. Sample Collected By MSV Analytical Laboratories

Sample Quantity 4.

2 Liters

Sample Description/condition 5.

Good/Satisfactory

Date of Sampling 6.

26.06.2023 4782

Sample Code 7.

Date of Sample Receipt 8. 9. **Analysis Starting Date**

26.06.2023 27.06.2023

Analysis Completion date 10.

01.07.2023

Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
		Chemical parameters	S		9
21	Manganese as Mn	APHA 23 rd EDITION -3111 B	mg/l	0.013	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.015	15
23	Boron as B	APHA 23 rd EDITION -4500 B	mg/l	Nil	γ
24	Barium as Ba	APHA 23 rd EDITION -3500 Ba	mg/l	0.002	1.0
25	Silver as Ag	APHA 23 rd EDITION -3500 Ag	mg/l	< 0.001	0.05
26	Arsenic as As	APHA 23 rdEDITION -3112 B	mg/l	< 0.002	0.05
27	Mercury as Hg	APHA 23rd EDITION -3112 B	mg/l	< 0.001	0.001
28	Lead as Pb	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.1
29.	Cadmium as Cd	APHA 23 rd EDITION -3111 B	mg/l	< 0.001	0.01
30	Chromium as Cr	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.05
31	Selenium as Se	APHA 23 rd EDITION -3500 B	mg/l	< 0.001	0.01
32	Cyanide as CN	APHA 23 rd EDITION -4500 D	mg/l	Nil	0.05
33	Phenols	IS: 3025(part-43)	mg/l	Nil	0.002
34	Anionic Detergents as MBAS	IS: 13428-2005	mg/l	<0.1	0.2
35	Percent Sodium	LAB SOP	%	24.2	
36	Sodium Absorption Ratio	LAB SOP	mg/l	9.8	

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit Report Status: - The above parameters are within limits.

-: END OF REPOR

Analysed by

Senior Chemist

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 : labmsy@gmail.com, msyalbellary2018@gmail.com, msy.lab01@gmail.com Web ID : www.msyalbellary.com



MSVAL/A/F/18/03

Report Issued Date: 01.07.2023

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: TC407123000003157F

1. Name of the Industry

Sample Type

6. Date of Sampling

8. Date of sample Receipt

10. Analysis Completion Date

11. Sample tested as Received

9. Analysis Starting Date

7. Sample Code

3. Sample Collected By4. Sample Quantity

5. Sample description/condition

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

(Metal & Ferro Alloys Plant)

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

: Surface water - Water body near Narayadevarakere

: MSV Analytical Laboratories, Bellary.

: 250 ml (Sterilized Bottle)

Good/satisfactory

26.06.2023

: 4783

: 26.06.2023 : 27.06.2023

: 01.07.2023

RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS – 2296
Total Coliform	IS 1622:1981	MPN/100 ml	18	50

INFERENCE	IS - 2296 Standards, BDL - Below Detectable Limit
	Report Status: - The above parameters are within limits.

Analysed by Shwitho. (A



Authorized Signatory

Curood

Eshwari

Sr.Microbiologist

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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2.

MSV Analytical Laboratories

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NABL Accredited Laboratory

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.ms/s/b/dla/y/v/f/m/13/70-4071

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC407123000003158F

Name of the sample

Name of the Industry :

Report Issued Date: 01.07.2023

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

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka. Surface water – Pond Water Ayyanahalli

3. Sample Collected By : MSV Analytical Laboratories

4. Sample Quantity : 2 Liters

5. Sample Description/condition : Good/Satisfactory

6. Date of Sampling : 26.06.2023
7. Sample Code : 4784
8. Date of Sample Receipt : 26.06.2023
9. Analysis Starting Date : 27.06.2023
10. Analysis Completion date : 01.07.2023

Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
		Physical paramete	rs		
1	Taste	IS: 3025(part-7)		Agreeable	Agreeable
2	Color	IS: 3025(part-4)		<5	10
3	Odor	IS: 3025(part-5)	A. I.	Un objectionable	Un objectionable
4	рН	IS: 3025(part-11)	W-111	7.23	6.5-8.5
5	Conductivity	IS-3025 (part 14)	μs/cm	751	
		Chemical paramete	ers	<i>b</i> :	
6	Total Dissolved Solids	IS: 3025(part-16)	mg/l	462	500
7	Calcium as Ca	IS: 3025(part-40)	mg/l	44.8	80.10
8	Total Hardness as CaCO ₃	IS: 3025(part-21)	mg/l	182.3	300
9 Magnesium as Mg		IS: 3025(part-46)	mg/l	17.0	24.28
10	Oil &Grease	IS: 3025(part-39)	mg/l	Nil	
11	Mineral Oil	APHA 23 rd EDITION - 5520 C	mg/l	Nil	0.01
. 12	Sulphate as SO ₄	IS: 3025(part-24)	mg/l	24.2	400
13	Chloride as Cl	IS: 3025(part-32)	mg/l	96.4	250
. 14	Nitrate as NO ₃	IS: 3025(part-34)	mg/l	0.92	20
15	Iron as Fe	IS: 3025(part-53)	mg/l	0.003	0.3
16	Fluoride as F	IS: 3025(part-60)	mg/l	0.43	1.50
17	Bio-chemical Oxygen Demand (3 days at 27°C), Max	IS 3025 (Part 44): 1993	mg/l	Nil	2
18	Dissolved Oxygen	IS 3025 (Part 38): 1993	mg/l	7.13	Min 6
19	Free CO2	LAB SOP	mg/l	Nil	
20	Free Ammonia	LAB SOP	mg/l	Nil	

INFERENCE IS – 2296 Standards, BDL – Below Detectable Limit Report Status: - The above parameters are within limits.

Analysed by

Authorized Signatory Ramana Gouda Senior Chemist

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.

-: END OF REPOR

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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2023/0846

Report Issued Date: 01.07.2023

Name of the Industry 1.

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

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka. Surface water - Pond Water Ayyanahalli

2. Name of the sample Sample Collected By 3.

MSV Analytical Laboratories

Sample Quantity 4.

2 Liters

Sample Description/condition 5.

Good/Satisfactory

Date of Sampling 6.

26.06.2023

Sample Code 7. **Date of Sample Receipt** 8.

4785 26.06.2023

9. **Analysis Starting Date Analysis Completion date** 10.

27.06.2023 01.07.2023

Sample tested As Received

	Sample tested As I	Received			
S.No	Parameters	Protocol	Unit	Result	Standards as per IS – 2296
	7	Chemical parameter	S		
21	Manganese as Mn	APHA 23 rd EDITION -3111 B	mg/l	0.010	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.016	15
23	Boron as B	APHA 23 rd EDITION -4500 B	mg/l	Nil	
24	Barium as Ba	APHA 23 rd EDITION -3500 Ba	mg/l	0.002	1.0
25	Silver as Ag	APHA 23 rd EDITION -3500 Ag	mg/l	< 0.001	0.05
26	Arsenic as As	APHA 23 rdEDITION -3112 B	mg/l	< 0.002	0.05
27	Mercury as Hg	APHA 23rd EDITION -3112 B	mg/l	< 0.001	0.001
28	Lead as Pb	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.1
29	Cadmium as Cd	APHA 23 rd EDITION -3111 B	mg/l	< 0.001	0.01
30	Chromium as Cr	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.05
31	Selenium as Se	APHA 23 rd EDITION -3500 B	mg/l	< 0.001	0.01
32	Cyanide as CN	APHA 23 rd EDITION -4500 D	mg/l	Nil	0.05
33	Phenols	IS: 3025(part-43)	mg/l	Nil	0.002
34	Anionic Detergents as MBAS	IS: 13428-2005	mg/l	<0.1	0.2
35	Percent Sodium	LAB SOP	%	22.4	
36	Sodium Absorption Ratio	LAB SOP	mg/l	10.3	

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

Report Status: - The above parameters are within limits.

Analysed by

Authorized Signatory Ramana Gouda Senior Chemist

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 gate 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 WATER IN MICROBIOLOGY

Test Report No: TC407123000003159F

Report Issued Date: 01.07.2023

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

Surface water - Pond Water Ayyanahalli

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Sample Quantity

250 ml (Sterilized Bottle)

5. Sample description/condition

Good/satisfactory

6. Date of Sampling

26.06.2023

7. Sample Code

4786

26.06.2023

8. Date of sample Receipt 9. Analysis Starting Date

27.06.2023

10. Analysis Completion Date

01.07.2023

11. Sample tested as Received

RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS – 2296
Total Coliform	IS 1622:1981	MPN/100 ml	24	50

INFERENCE IS - 2296 Standards, BDL - Below Detectable Limit Report Status: - The above parameters are within limits.

Bhwetha . 8



Authorized Signatory Dwalel Eshwari

Sr.Microbiologist

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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