

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



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017735F

Report Issued Date: 06.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt Analysis Starting Date 6.

01.09.2022 02.09.2022

Analysis Completion Date Sample Tested as Received 06.09.2022

C N -	Parameter	Protocols	Shif	t wise resu	ılts	Units	Result	Tolerance limits
S.No	Parameter	Trotocols	1	2	3	7000000	in Avg.	
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	56.4	55.7	54.2	μg / m³	55.4	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	29.2	17.4	16.6	μg / m³	21.1	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	10.2	9.3	8.8	μg / m³	9.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	16.8	15.8	15.2	μg / m³	15.9	80
5	Ozone as O ₃	IS 5182(part-9)1974	9.2	8.8	8.4	μg / m³	8.8	100
6	Lead	IS-5182(Part22) - 2004	0.032	0.027	0.022	μg / m³	0.0	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.38	0.34	0.30	mg/m³	0.3	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.25	1.20	ng/m³	1.2	20

INFERENCE

As per NAAQS Standards

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

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

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

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

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



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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/8914

Report Issued Date: 06.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Smiore Colony

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

01.09.2022

Analysis Starting Date

02.09.2022

Analysis Completion Date Sample Tested as Received 06.09.2022

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

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

Authorized Signature

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

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

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017736F

Report Issued Date: 06.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

Kallahalli Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

Particulars of the sample
 Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131

6. Analysis Starting Date
7. Analysis Completion Date

01.09.2022 02.09.2022

. Sample Tested as Received

06.09.2022

S.No	Parameter	Protocols	Shif	t wise resu	ılts	Units	Result	Tolerance limits
SiNO			1	2	3		in Avg.	
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	56.8	55.6	54.2	μg / m³	55.5	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	19.4	18.7	18.1	μg / m³	18.7	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) – 2001	10.3	9.4	9.1	μg / m³	9.6	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	17.2	15.9	15.3	μg / m³	16.1	80
5	Ozone as O ₃	IS 5182(part-9)1974	10.7	10.4	10.1	μg / m³	10.4	100
6	Lead	IS-5182(Part22) - 2004	0.027	0.024	0.020	μg / m³	0.0	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.35	0.32	0.27	mg/m³	0.3	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.21	1.18	1.14	ng/m³	1.2	20

INFERENCE

As per NAAQS Standards

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

Verified by

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Authorized Signature 2

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/8915

Report Issued Date: 06.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

01.09.2022

Analysis Starting Date

02.09.2022 06.09.2022

Analysis Completion Date Sample Tested as Received

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

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

Verified by

Authorized Signature

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

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

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



MSVAL/A/F/16/03 ·

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017737F

Report Issued Date: 06.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Vysanakere Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

01.09.2022

Date of Sample Receipt
 Analysis Starting Date
 Analysis Completion Date

02.09.2022

3. Sample Tested as Received

S.No	Parameter	Protocols	Shi	ft wise res	ults	Units	Result	Toleranc e limits
5.110			1	2	3		in Avg.	
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	51.5	50.8	50.1	μg / m³	50.8	100
2	Particulate Matter or PM _{2.5} μg/m ³	LAB SOP MSVAL/SOP/A/005	16.8	16.2	15.7	μg / m³	16.2	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	8.0	7.5	6.5	μg / m³	7.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	14.2	13.2	12.2	µg / m³	13.2	80
5	Ozone as O ₃	IS 5182(part-9)1974	8.8	8.3	7.8	μg / m³	8.3	100
6	Lead	IS-5182(Part22) – 2004	0.024	0.020	0.015	μg / m³	0.0	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.34	0.30	0.25	mg/m³	0.3	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.0.1	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.24	1.20	ng/m³	1.2	20

INFERENCE

As per NAAOS Standards

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

Verified by

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/8916

Report Issued Date: 06.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Vysanakere Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt

Parameter

01.09.2022

6. Analysis Starting Date7. Analysis Completion Date

02.09.2022 06.09.2022

3. Sample Tested as Received

 $\frac{\text{Shift wise results}}{1} = \frac{\text{Shift wise results}}{1} = \frac{\text{Units}}{2} = \frac{\text{Result in Avg.}}{2} = \frac{\text{Tolerance limits}}{2}$

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

INFERENCE

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As per NAAQS Standards

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

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



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017738F

Report Issued Date: 06.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

: 01.09.2022 : 02.09.2022

Analysis Completion Date
 Sample Tested as Received

06.09.2022

S.No	Parameter	Protocols	Shift wise results			Units	Result	Tolerance
00		110101010	1	2	3		in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m³	IS-5182(Part-23) – 2006	55.8	55.1	54.2	μg / m ³	55.0	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	15.2	14.7	13.6	μg / m³	14.5	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	8.6	7.5	6.9	μg / m³	7.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	15.4	14.2	13.2	μg / m³	14.3	80
5	Ozone as O ₃	IS 5182(part-9)1974	8.4	8.0	7.6	μg / m³	8.0	100
6	Lead	IS-5182(Part22) – 2004	0.042	0.038	0.034	μg / m³	0.0	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.28	0.25	0.20	mg/m³	0.2	2
0	Ammonio oc NU	LAB SOP	-0.01	-0.01	-0.01	ug / m3	<0.01	400

< 0.01

1.30

INFERENCE

9

Ammonia as NH₃

Nickel as Ni

As per NAAQS Standards

MSVAL/SOP/A/006 LAB SOP

MSVAL/SOP/A/008

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

< 0.01

1.25

< 0.01

1.20

 $\mu g / m^3$

ng / m3

Verified by

End of The Report

L'Authorized Signature

< 0.01

1.3

400

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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/8917

Report Issued Date: 06.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Gunda Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

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

Sample collected with RDS APM460 and FDS GTI-131

Analysis Starting Date

01.09.2022 02.09.2022

7. **Analysis Completion Date** Sample Tested as Received 06.09.2022

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

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

Verified by

Authorized Signature

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

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

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017678F

Report Issued Date: 10.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Smiore Colony

3 Sample Collected By MSV Analytical Laboratories, Bellary.

Particulars of the sample 5. Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131

06.09.2022

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

07.09.2022 10.09.2022

Sample Tested as Deseived

S.No	Parameter	Protocols	Shift wise results			Units	Result	Tolerance
	54 JULY 17-00-000/12/91-00-001		1	2	3	Omes	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	56.1	57.6	58.4	μg / m³	57.4	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	18.5	19.6	20.5	μg / m³	19.5	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) – 2001	10.1	10.8	11.9	μg / m³	10.9	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	14.5	14.6	15.7	μg / m³	14.9	80
5	Ozone as O ₃	IS 5182(part-9)1974	9.2	9.4	9.6	μg / m³	9.4	100
6	Lead	IS-5182(Part22) - 2004	0.024	0.025	0.023	μg / m³	0.0	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.38	0.40	0.36	mg/m³	0.4	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.29	1.30	ng/m³	1.3	20

INFERENCE

As per NAAQS Standards

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

Verlied



ote: 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.



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9092

Report Issued Date: 10.09,2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

Vyas<mark>anake</mark>re, Hanumanahalli Village, Hospet Taluk, Be<mark>llary Dis</mark>trict, Karnataka.

2. Name of the location

: Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

06.09.2022

7. Analysis Completion Date

07.09.2022

8. Sample Tested as Received

10.09.2022

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

INFERENCE

As per NAAQS Standards

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

Verified by



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



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



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017679F

Report Issued Date: 10.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

06.09.2022 07.09.2022

Analysis Completion Date

: 10.09.2022

Sample Tested as Received

S.No	Parameter	Protocols	Sh	ift wise re	sults	Units	Result	Tolerance
			1	2	3	Onics	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	52.1	53.6	54.6	μg / m ³	53.4	100
2	Particulate Matter or PM _{2.5} μg/m ³	LAB SOP MSVAL/SOP/A/005	16.3	17.2	18.5	μg / m³	17.3	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	7.7	8.1	8.8	μg / m³	8.2	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	15.2	15.8	16.4	μg / m³	15.8	80
5	Ozone as O ₃	IS 5182(part-9)1974	9.2	9.1	9.4	μg / m³	9.2	100
6	Lead	IS-5182(Part22) - 2004	0.026	0.027	0.025	μg / m ³	0.0	100
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.48	0.50	0.46	mg/m³	0.5	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.38	1.39	1.40	ng/m³	1.4	20

INFERENCE

As per NAAQS Standards

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



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

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

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

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

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



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9094

Report Issued Date: 10.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

Vyasa<mark>nakere, Hanumana</mark>halli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

06.09.2022 07.09.2022

Analysis Starting Date **Analysis Completion Date**

10.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

 ng/m^3

Verified by

Authorized Signature

< 0.01

6

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



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



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017680F

Report Issued Date: 10.09.2022

1. Name of the Project

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

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

2. Name of the location

Vysanakere Village

Sample Collected By 4

MSV Analytical Laboratories, Bellary.

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

06.09.2022

6 **Analysis Starting Date**

07.09.2022

Analysis Completion Date Sample Tested as Received

10.09.2022

S.No	Parameter	Protocols	Sh	ift wise re	sults	Units	Result	Tolerance
			1	2	3	Units	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	54.2	55.6	56.2	μg / m ³	55.3	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	21.2	22.5	23.6	μg / m ³	22.4	60
3	Sulphur Dioxide as SQ _x	IS-5182(Part-2) - 2001	9.5	10.5	10.8	μg / m³	10.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	10.5	11.5	11.6	μg / m³	11.2	80
5	Ozone as O ₃	IS 5182(part-9)1974	7.5	7.7	7.9	μg / m³	7.7	
6	Lead	IS-5182(Part22) - 2004	0.018	0.017	0.016	μg / m ³	0.0	100
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.20	0.22	0.18	mg/m³	0.2	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.0.1	<0.01	μg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.21	1.22	ng/m³	1.2	20

INFERENCE

As per NAAQS Standards

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

e: 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

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9095

Report Issued Date: 10.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

Vyas<mark>an</mark>akere, H<mark>anumana</mark>halli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location
 Sample Collected By

: Vysanakere Village

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

: 06.09.2022 : 07.09.2022

7. Analysis Completion Date

: 10.09.2022

8. Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

End of Introduction

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



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



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017681F

Report Issued Date: 10.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Gunda Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM 460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

06.09.2022 07.09.2022

Analysis Completion Date

10.09.2022

Sample Tested as Received

S.No	Parameter	Protocols	SI	nift wise re	sults	Units	Result	Tolerance
		# 15/1/	1	2	3	Oints	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	55.2	56.3	57.8	μg / m³	56.4	100
2	Particulate Matter or PM _{2.5} μg/m ³	LAB SOP MSVAL/SOP/A/005	18.5	19.5	20.1	μg / m³	19.4	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	6.7	7.5	7.8	μg / m³	7.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	15.8	16.4	16.9	μg / m³	16.4	80
5	Ozone as O ₃	IS 5182(part-9)1974	8.1	8.3	8.5	μg / m³	8.3	
6	Lead	IS-5182(Part22) – 2004	0.026	0.025	0.024	μg / m³	0.0	100
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.36	0.38	0.34	mg/m³	0.4	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.27	1.26	1.25	ng/m³	1.3	20

INFERENCE

As per NAAQS Standards

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

Verified by

te: 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

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9093

Report Issued Date: 10.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

Vyasa<mark>n</mark>akere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131 06.09.2022

Date of Sample Receipt **Analysis Starting Date**

07.09.2022

Analysis Completion Date Sample Tested as Received

10.09.2022

S.No	Parameter	Protocols	Si	Shift wise results		Shift wise results		Shift wise results		Shift wise results		Units	Result in	Tolerance
			1	2	3	Units	Avg.	Tolerance limits						
10	Benzene as C ₆ H ₆	IS:5182(part 11) - 2006	<0.01	<0.01	<0.01	μg / m³	-0.01							
11	Benzo (α) Pyrene	CPCB Procedure	.0.01		1/4-5-55	μ6/111	<0.01	5						
12	(BaP)		<0.01	<0.01	<0.01	ng/m³	<0.01	1						
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	< 0.01	ng/m³	<0.01	6						

INFERENCE

As per NAAQS Standards

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

Verified b

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



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TC-7207

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017820F

Report Issued Date: 14.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

09.09.2022 10.09.2022

Analysis Completion Date

: 14.09.2022

Sample Tested as Received

S.No	Parameter	Protocols	Shi	ft wise res	ults	Units	Result	Tolerance
		K TY I	1	2	3		in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	53.8	60.2	61.9	μg / m³	58.6	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	22.6	21.4	20.3	μg / m³	21.4	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	10.2	12.2	11.6	µg / m³	11.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	15.3	16.8	15.9	μg / m³	16.0	80
5	Ozone as O ₃	IS 5182(part-9)1974	10.6	12.3	13.4	μg / m³	12.1	100
6	Lead	IS-5182(Part22) – 2004	0.024	0.036	0.042	µg / m³	0.034	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.38	0.46	0.52	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	1.26	1.48	1.34	ng/m³	1.36	20

INFERENCE

As per NAAQS Standards

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



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

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

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

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

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9161

Report Issued Date: 14.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Smiore Colony

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt

: 09.09.2022

6. Analysis Starting Date
7. Analysis Completion Date

: 10.09.2022

7. Analysis Completion Date

14.09.2022

8. Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

FIND BATTLE REPORTS

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017821F

Report Issued Date: 14.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Kallahalli Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

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

Sample collected with RDS APM460 and FDS GTI-131

Analysis Starting Date Analysis Completion Date 7.

09.09.2022 10.09.2022 14.09.2022

		Protocols	Shift	wise resu	lts	Units	Result in Avg.	Tolerance
S.No	Parameter	Protocois	1	2	3		m Avg.	- Innited
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	63.8	64.6	62.9	μg / m³	63.8	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	22.3	21.6	24.8	μg / m³	22.9	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	10.6	12.2	11.6	μg / m³	11.5	80
4	Oxides of Nitrogen as	IS-5182(Part-6) – 2006	14.8	12.6	13.8	μg / m³	13.7	80
	Ozone as O ₃	IS 5182(part-9)1974	10.2	13.8	14.2	μg / m³	12.7	100
5 6	Lead	IS-5182(Part22) - 2004	0.018	0.029	0.032	μg / m³	0.026	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.28	0.24	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	1.42	1.36	1.02	ng/m³	1.27	20

INFERENCE

As per NAAQS Standards

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

Authorized Signature

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

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

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



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9162

Report Issued Date: 14.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131 09.09.2022

Date of Sample Receipt **Analysis Starting Date**

10.09.2022

Analysis Completion Date

14.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

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



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TC-7207

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017822F

Report Issued Date: 14.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Vysanakere Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

Particulars of the sample

09.09.2022

Date of Sample Receipt **Analysis Starting Date**

10.09.2022

Analysis Completion Date

14.09.2022

Sample Tested as Received

S.No	Parameter	Protocols	Shi	ift wise res	sults	Units	Result	Tolerand
			1	2	3		in Avg.	Toleranc e limits 100 60 80 100 1 2
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	54.3	55,6	51.2	μg / m³	53.7	100
2	Particulate Matter or PM _{2.5} μg/m ³	LAB SOP MSVAL/SOP/A/005	16.8	17.2	15.9	μg / m³	16.6	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	9.8	8.6	10.2	μg / m³	9.5	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	12.2	14.2	13.6	µg / m³	13.3	80
5	Ozone as O ₃	IS 5182(part-9)1974	5.6	3.8	4.2	μg / m³	4.5	100
6	Lead	IS-5182(Part22) - 2004	0.026	0.038	.041	μg / m³	0.035	
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.26	0.38	0.22	mg/m³	0.29	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.0.1	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.28	1.02	ng/m³	1.22	20

INFERENCE

As per NAAQS Standards

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



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

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

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

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

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



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9163

Report Issued Date: 14.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Vysanakere Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

09.09.2022

Analysis Starting Date

10.09.2022

Analysis Completion Date

14.09.2022

8.	Sample	Tested	as	Receiv	red.

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

INFERENCE

As per NAAQS Standards

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

Verified by

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



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



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017823F

Report Issued Date: 14.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt
 Analysis Starting Date

09.09.2022 10.09.2022

:

7. Analysis Completion Date

14.09.2022

3. Sample Tested as Received

Shift wise results Result Tolerance Units S.No Parameter Protocols in Avg. limits 2 3 1 Particulate Matter IS-5182(Part-23) -51.3 100 537 $\mu g / m^3$ 51.4 48.9 1 PM₁₀ μg/m³ 2006 LAB SOP Particulate Matter or 60 178 16.8 19.4 $\mu g / m^3$ 2 17.2 $PM_{2.5} \mu g/m^3$ MSVAL/SOP/A/005 IS-5182(Part-2) -80 $\mu g / m^3$ 10.7 Sulphur Dioxide as SOx 10.2 12.2 9.8 3 2001 IS-5182(Part-6) -Oxides of Nitrogen as 80 15.1 $\mu g / m^3$ 13.4 15.8 16.2 4 NO_x 2006 5.4 5.2 $\mu g / m^3$ 4.8 Ozone as O₃ IS 5182(part-9)1974 6.3 100 5 IS-5182(Part22) -0.026 1 0.026 0.034 0.018 $\mu g / m^3$ 6 Lead 2004 LAB SOP Carbon Monoxide as 0.35 2 0.42 0.28 mg/m^3 0.36 7 MSVAL/SOP/A/007 LAB SOP < 0.01 400 < 0.01 < 0.01 < 0.01 $\mu g / m^3$ 8 Ammonia as NH₂ MSVAL/SOP/A/006 LAB SOP 1.35 1.36 1.22 1.48 ng / m³ 20 Nickel as Ni 9 MSVAL/SOP/A/008

INFERENCE

As per NAAQS Standards

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

Verified 500 NO



Authorized Signature

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

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

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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9164

Report Issued Date: 14.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Gunda Village

Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt

09.09.2022

Analysis Starting Date
 Analysis Completion Date

: 10.09.2022 : 14.09.2022

8. Sample Tested as Received

S.No	Parameter	Protocols	Sh	ift wise re	esults	Units	Result in	Tolerance
			1	2	3	0.11.0	Avg.	limits
10	Benzene as C ₆ H ₆	IS:5182(part 11) - 2006	<0.01	<0.01	<0.01	μg / m³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	ng/m³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	< 0.01	ng/m³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Verified by

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



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017977F

Report Issued Date: 17.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

13.09.2022

Analysis Starting Date Analysis Completion Date

14.09.2022 : 17.09.2022

Sample Tested as Received

		Protocols	Shift	wise resu	lts	Units	Result in Avg.	Tolerance limits 100 60 80 80 100 1 2 400
S.No	Parameter	Protocois	1	2	3		m Avg.	IIIIICS
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	58.2	59.6	60.2	μg / m³	59.3	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	25.6	26.3	27.8	μg / m ³	26.6	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	9.4	9.8	10.8	μg / m³	10.0	80
4	Oxides of Nitrogen as	IS-5182(Part-6) - 2006	18.2	18.8	19.4	μg / m³	18.8	80
5	Ozone as O ₃	IS 5182(part-9)1974	13.5	13.2	13.4	μg / m³	13.4	100
6	Lead	IS-5182(Part22) - 2004	0.026	0.027	0.028	μg / m³	0.2	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.22	0.24	0.20	mg/m³	0.2	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.34	1.35	1.33	ng/m³	1.3	20

INFERENCE

As per NAAQS Standards

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

erified by

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

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. 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.



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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9333

Report Issued Date: 17.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

13.09.2022

Analysis Starting Date Analysis Completion Date 14.09.2022 17.09.2022

Sample Tested as Received

S.No Parameter	Domeston	Protocols	Shi	ift wise re	sults	Units	Result in	Tolerance limits
	Trotocois	1	2	3		11.6.	#2.509(0X\$2	
10	Benzene as C ₆ H ₆	IS:5182(part 11) - 2006	<0.01	<0.01	<0.01	μg / m³	<0.01	5
11	Benzo (α) Pyrene	CPCB Procedure	<0.01	<0.01	<0.01	ng / m³	<0.01	1
12	(BaP) Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	ng / m ³	<0.01	6

INFERENCE

As per NAAQS Standards

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

Verified by



^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of lest certificate issue. 3. This report is not to be reproduced wholly or in p 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 investment of 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 investment of 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 investment of the court of law & should not be used in any advertising media without our special permission in writing. 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 are not accredited by NABL.



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

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017978F

Report Issued Date: 17.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Kallahalli Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

13.09.2022

7. Analysis Completion Date

: 14.09.2022 : 17.09.2022

8. Sample Tested as Received

S.No	Parameter	Protocols	Shif	Shift wise results		Units	Result	Tolerance
3.110	T at ameter	110000013	1	2	3	5.000.000	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	52.3	53.6	54.2	μg / m³	53.4	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	18.2	19.6	20.5	μg / m³	19.4	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	7.8	8.4	8.8	μg / m³	8.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	15.6	16.4	17.5	μg / m³	16.5	80
5	Ozone as O ₃	IS 5182(part-9)1974	8.6	9.5	9.2	μg / m³	9.1	100
6	Lead	IS-5182(Part22) - 2004	0.024	0.025	0.023	μg / m³	0.2	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.30	0.32	0.28	mg/m³	0.3	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.90	1.92	1.91	ng / m³	1.9	20

INFERENCE

As per NAAQS Standards

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

Verified by



Authorized Signature

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

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

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

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9334

Report Issued Date: 17.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

Vyas<mark>a</mark>nak<mark>ere, Hanum</mark>ana<mark>h</mark>alli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Kallahalli Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131 13.09.2022

5. Date of Sample Receipt6. Analysis Starting Date

14.09.2022

6. Analysis Starting Date
7. Analysis Completion Date

: 14.09.2022 : 17.09.2022

8. Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

BALLAD REPORT

^{1.} The results listed only to the tested samples & applicable parameters, 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1month from the date of test certificate issue. 3. This report is not to be reproduced wholly or in par 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 invo 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 a are not accredited by NABL.



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

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



MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017979F

Report Issued Date: 17.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

Vysanakere Village

MSV Analytical Laboratories, Bellary.

Sample Collected By
 Particulars of the sample

1

5. Date of Sample Receipt

13.09.2022

6. Analysis Starting Date

: 14.09.2022

7. Analysis Completion Date

: 17.09.2022

C No	Parameter	Protocols	Shif	t wise resu	ılts	Units	Result	Tolerance
S.No	Parameter	Frotocols	1	2	3		in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	59.2	60.5	58.9	μg / m³	59.5	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	23.6	24.6	22.6	μg / m³	23.6	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	8.4	8.8	9.4	μg / m³	8.9	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	17.6	18.2	18.8	μg / m³	18.2	80
5	Ozone as O ₃	IS 5182(part-9)1974	7.2	7.4	7.6	μg / m³	7.4	100
6	Lead	IS-5182(Part22) - 2004	0.028	0.030	0.024	μg / m³	0.2	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.30	0.32	0.28	mg/m³	0.3	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.0.1	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.38	1.39	1.40	ng / m³	1.4	20

INCEDENCE

As per NAAQS Standards

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

verified by

End of The Reports

Authorized Signature

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

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

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

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9335

Report Issued Date: 17.09.2022

1. Name of the Project

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

Vyas<mark>an</mark>akere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Vysanakere Village

у :

Sample Collected By
 Particulars of the sample

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

5. Date of Sample Receipt

13.09.2022

6. Analysis Starting Date

14.09.2022

7. Analysis Completion Date

17.09.2022

3. Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

Find of The Report

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



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000017980F

Report Issued Date: 17.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM 460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

13.09.2022 14.09.2022

7. Analysis Starting Date
7. Analysis Completion Date

17.09.2022

8. Sample Tested as Received

S.No	Parameter	Protocols	Shi	Shift wise results		Units	Result	Tolerance
5.110	1 arameter	- V1	1	2	3	2012an(3-200)	in Avg.	limits
1	Particulate Matter PM ₁₀ μg/m ³	IS-5182(Part-23) - 2006	59.3	60.3	61.5	μg / m³	60.4	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	23.6	24.5	25.9	$\mu g / m^3$	24.7	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) – 2001	8.8	9.4	9.8	$\mu g / m^3$	9.3	80
4	Oxides of Nitrogen as	IS-5182(Part-6) - 2006	17.5	17.6	18.2	$\mu g / m^3$	17.8	80
5	Ozone as O ₃	IS 5182(part-9)1974	10.6	10.2	10.4	μg / m³	10.4	100
6	Lead	IS-5182(Part22) - 2004	0.023	0.025	0.022	$\mu g / m^3$	0.2	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.28	0.30	0.26	mg/m³	0.3	2
8	Ammonia as NH₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	$\mu g / m^3$	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.24	1.25	1.23	ng / m³	1.2	20

INFERENCE

As per NAAQS Standards

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

Verified by

Authorized Signature

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

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

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

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



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9336

Report Issued Date: 17.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

Vyasanake<mark>re, Hanuma</mark>nahalli Village, Hospet Taluk, Bellary District, Karnataka.

Name of the location

Gunda Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Sample collected with RDS APM460 and FDS GTI-131

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

13.09.2022

Analysis Starting Date

14.09.2022

Analysis Completion Date

17.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

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



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



TC-7207

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018108F

Report Issued Date: 21.09.2022

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

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

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

Name of the location : Smiore Colony

Sample Collected By : MSV Analytical Laboratories, Bellary.

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

Date of Sample Receipt: 16.09.2022
Analysis Starting Date: 17.09.2022
Analysis Completion Date: 21.09.2022

8. Sample Tested as Received

S.No	Parameter	Protocols	Shi	ft wise res	ults	Units	Result	Tolerance
		1,0100013	1	2	3	Onits	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	58.2	57.3	59.6	μg / m³	58.4	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	31.2	32.5	33.5	μg / m³	32.4	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) – 2001	10.5	10.8	11.2	μg / m³	10.8	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	17.6	18.2	18.7	μg / m³	18.2	80
5	Ozone as O ₃	IS 5182(part-9)1974	9.8	10.5	10.6	μg / m³	10.3	100
6	Lead	IS-5182(Part22) – 2004	0.025	0.027	0.026	μg / m ³	0.0	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.24	0.26	0.22	mg/m³	0.2	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.25	1.26	1.24	ng/m³	1.3	20

INFERENCE

As per NAAQS Standards

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

Verified by



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

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9416

Report Issued Date: 21.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary,

Particulars of the sample Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131

16.09.2022

Analysis Starting Date Analysis Completion Date

17.09.2022 21.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

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



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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018109F

Report Issued Date: 21.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt 6. Analysis Starting Date 16.09.2022 17.09.2022

7. Analysis Completion Date

21.09.2022

8. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result	Tolerance
			1	2	3	- Cinco	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	52.3	53.6	54.6	μg / m³	53.5	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	17.6	18.6	19.5	μg / m³	18.6	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	7.8	8.4	8.8	μg / m³	8.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	17.1	17.6	18.2	μg / m³	17.6	80
5	Ozone as O ₃	IS 5182(part-9)1974	8.6	8.8	9.6	μg / m³	9.0	100
6	Lead	IS-5182(Part22) - 2004	0.024	0.025	0.023	μg / m³	0.2	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.26	0.22	mg/m³	0.2	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.43	1.44	1.42	ng / m³	1.4	20

INFERENCE

As per NAAQS Standards

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

Verified by



Authorized Signature

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

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

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

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



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Sanganakallu Road, KEB Circle, Bellary-583103. Contact No: Mob: 94498 03895, (0): 08392-255169,
E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9517

Report Issued Date: 21.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

Vyas<mark>a</mark>nake<mark>re, Hanumana</mark>halli Village, Hospet Ta<mark>luk, Bellary Dis</mark>trict, Karnataka.

2. Name of the location

: Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

16.09.2022

7. Analysis Completion Date

: 17.09.2022 : 21.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018110F

Report Issued Date: 21.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Vysanakere Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample

16.09.2022

Date of Sample Receipt **Analysis Starting Date**

17.09.2022

Analysis Completion Date

21.09.2022

CN-	Parameter	Protocols	Shif	t wise resi	ılts	Units	Result	Tolerance limits
S.No	Parameter	Trotocols	1	2	3		in Avg.	lillies
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	59.2	60.2	61.5	μg / m³	60.3	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	23.5	22.5	23.6	μg / m³	23.2	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	8.2	8.7	9.1	μg / m³	8.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	17.6	18.2	18.8	μg / m³	18.2	80
5	Ozone as O ₃	IS 5182(part-9)1974	7.4	7.2	6.8	$\mu g / m^3$	7.1	100
6	Lead	IS-5182(Part22) - 2004	0.028	0.027	0.0296	μg / m³	0.0	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.28	0.30	0.26	mg/m³	0.3	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.0.1	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.32	1.30	1.31	ng/m³	1.3	20

INFERENCE

As per NAAQS Standards

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

Verified



Authorized Signature

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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9518

Report Issued Date: 21.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

Vysanakere Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt

16.09.2022

6. Analysis Starting Date7. Analysis Completion Date

: 17.09.2022 : 21.09.2022

8. Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

The Sales of Sales of

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018111F

Report Issued Date: 21.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location Gunda Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

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

Date of Sample Receipt

16.09.2022 17.09.2022

Analysis Starting Date Analysis Completion Date

21.09.2022

Sample Tested as Received

S.No	Parameter	Protocols	Sh	ift wise res	ults	Units	Result	Tolerance
			1	2	3	Onics	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m³	IS-5182(Part-23) – 2006	59.6	58.2	59.6	μg / m³	59.1	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	21.5	22.5	22.8	µg / m³	22.3	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) – 2001	8.7	9.1	9.8	μg / m³	9.2	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	16.9	17.6	18.5	μg / m³	17.7	80
5	Ozone as O ₃	IS 5182(part-9)1974	8.8	9.6	9.2	μg / m³	9.2	100
6	Lead	IS-5182(Part22) – 2004	0.025	0.026	0.024	μg / m³	0.2	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.30	0.26	mg/m³	0.3	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.25	1.24	1.26	ng/m³	1.3	20

INFERENCE

As per NAAQS Standards

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

verification

Authorized Signature

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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9519

Report Issued Date: 21.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

Vyasanake<mark>re, Hanumana</mark>halli Village, Hosp<mark>et Taluk, Bellary District, Karnataka.</mark>

2. Name of the location

: Gunda Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

16.09.2022 17.09.2022

Analysis Completion Date
 Sample Tested as Received

21.09.2022

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

INFERENCE

As per NAAQS Standards

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

Verified by

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



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



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018241F

Report Issued Date: 24.09.2022

1. Name of the Project

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

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

2. Name of the location

: Smiore Colony

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt

19.09.2022

6. Analysis Starting Date7. Analysis Completion Date

: 20.09.2022 : 24.09.2022

8. Sample Tested as Received

S.No	Parameter	Protocols	Shi	ft wise res	ults	Units	Result	Tolerance
		- TV	1	2	3	Omits	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	63.8	59.6	61.2	μg / m³	61.5	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	22.3	21.3	20.4	μg / m³	21.3	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	13.8	12.2	11.6	µg / m³	12.5	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	16.8	17.6	16.4	μg / m³	16.9	80
5	Ozone as O ₃	IS 5182(part-9)1974	12.2	13.4	13.0	μg / m³	12.9	100
6	Lead	IS-5182(Part22) - 2004	0.038	0.048	0.052	µg / m³	0.046	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.48	0.36	0.42	mg/m³	0.42	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	1.42	1.22	ng / m³	1.33	20

INFERENCE

As per NAAQS Standards

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

Verified by



Authorized Signature

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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9499

Report Issued Date: 24.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

Vy<mark>asan</mark>akere, H<mark>anumana</mark>halli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

: Smiore Colony

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt

19.09.2022

Analysis Starting Date
 Analysis Completion Date

20.09.2022 24.09.2022

8. Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018242F

Report Issued Date: 24.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

: Kallahalli Village

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131 19.09.2022

Date of Sample Receipt
 Analysis Starting Date
 Analysis Completion Date

20.09.2022 24.09.2022

8. Sample Tested as Received

S.No	Parameter	Protocols	Shi	ft wise res	ults	Units	Units Result	
			1	2	3		in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	56.4	62.3	61.4	μg / m³	60.0	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	20.2	21.4	22.0	μg / m³	21.2	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) – 2001	10.6	11.6	12.0	μg / m³	11.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	16.4	15.8	17.2	μg / m³	16.5	80
5	Ozone as O ₃	IS 5182(part-9)1974	13.4	12.2	10.6	μg / m³	12.1	100
6	Lead	IS-5182(Part22) - 2004	0.036	0.048	.037	μg / m³	0.040	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.52	0.36	0.42	mg/m³	0.43	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	1.25	1.14	ng/m³	1.25	20

INFERENCE

As per NAAQS Standards

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

Verificathy

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Authorized Signature

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

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

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9500

Report Issued Date: 24.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

19.09.2022

Analysis Starting Date

20.09.2022

Analysis Completion Date

24.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018243F

Report Issued Date: 24.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Vysanakere Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

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

19.09.2022 20.09.2022

Analysis Completion Date

24.09.2022

CNA	Parameter	Protocols	Shif	t wise resu	ılts	Units	Result	Toleranc
S.No	Parameter	Trotocois	1	2	3		in Avg.	e limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	56.6	61.4	63.8	μg / m³	60.6	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	21.4	22.6	23.7	μg / m³	22.6	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	15.7	14.2	13.8	μg / m³	14.6	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	18.8	17.6	17.2	μg / m³	17.9	80
5	Ozone as O ₃	IS 5182(part-9)1974	9.8	10.4	11.6	μg / m³	10.6	100
6	Lead	IS-5182(Part22) - 2004	0.038	0.048	0.038	μg / m³	0.041	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.38	0.46	0.48	mg/m³	0.44	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.0.1	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.42	1.22	ng / m³	1.33	20

INFERENCE

As per NAAOS Standards

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

Verified by

Authorized Signature

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

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

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9501

Report Issued Date: 24.09.2022

Name of the Project

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

Vyasanakere, Hanumanahalli Village, Hos<mark>pet Taluk, Bellary Distr</mark>ict, Karnataka.

Name of the location

Vysanakere Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt 6. Analysis Starting Date

19.09.2022 20.09.2022

Analysis Completion Date

24.09.2022

In Tested on Despised

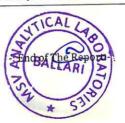
S.No	Parameter	Protocols	Sh	ift wise re	sults	Units	Result in	Tolerance limits
5.NO	Parameter	Trottocols	1	2	3		Avg.	IIIIIG
10	Benzene as C ₆ H ₆	IS:5182(part 11) - 2006	<0.01	<0.01	<0.01	μg / m³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	ng / m³	<0.01	1
12	Arsenic as As	CPCB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

INFERENCE

As per NAAQS Standards

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

Verified by



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018244F

Report Issued Date: 24.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Gunda Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample 4.

Sample collected with RDS APM460 and FDS GTI-131

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

19.09.2022

7. **Analysis Completion Date**

20.09.2022 24.09.2022

	Dton	Protocols	Shif	t wise resu	ılts	Units	Result in Avg.	Tolerance limits
S.No	Parameter	Trottocols	1	2	3		III Avg.	IIIIII
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	58.6	63.8	53.7	μg / m³	58.7	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	23.8	19.9	20.6	μg / m³	21.4	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	12.2	10.6	13.4	μg / m³	12.1	80
4	Oxides of Nitrogen as	IS-5182(Part-6) – 2006	16.6	17.2	15.8	μg / m³	16.5	80
5	Ozone as O ₃	IS 5182(part-9)1974	7.6	8.8	9.4	μg / m³	8.6	100
6	Lead	IS-5182(Part22) - 2004	0.038	0.047	0.038	μg / m³	0.041	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.38	0.66	0.42	mg/m³	0.49	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	1.22	1.14	1.36	ng/m³	1.24	20

INFERENCE

As per NAAQS Standards

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

Verifiett



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

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

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9502

Report Issued Date: 24.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

2. Name of the location

Gunda Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

19.09.2022

Analysis Starting Date Analysis Completion Date

20.09.2022 24.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

erified by

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



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018438F

Report Issued Date: 27.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Smiore Colony

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

22.09.2022 23.09.2022

Analysis Completion Date

: : 27.09.2022

Sample Tested as Received

S.No	Parameter	Protocols	Shi	ft wise res	ults	Units	Result	Tolerance
	36.04.76.96.76.76.96.94		1	2	3	250000000	in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	56.7	55.8	54.7	μg / m³	55.7	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	20.8	20.1	19.6	μg / m³	20.2	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	10.6	9.5	9.1	μg / m³	9.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	19.8	18.8	18.1	μg / m³	18.9	80
5	Ozone as O ₃	IS 5182(part-9)1974	11.3	10.8	12.2	μg / m³	11.4	100
6	Lead	IS-5182(Part22) - 2004	0.048	0.028	0.023	μg / m³	0.033	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.40	0.28	0.32	mg/m³	0.33	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	#DIV/0	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.17	1.25	1.04	ng/m³	1.15	20

INFERENCE

As per NAAQS Standards

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

Verified by



Authorized Signature

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

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

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



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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9598

Report Issued Date: 27.09.2022

1. Name of the Project

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

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

2. Name of the location

Hosp<mark>et Taluk, Bellary Dis</mark>trict, Karnataka.

: Smiore Colony

Sample Collected By
 Particulars of the sample

: MSV Analytical Laboratories, Bellary.

Sample collected with RDS APM460 and FDS GTI-131

< 0.01

ng/m3

5. Date of Sample Receipt 6. Analysis Starting Date 22.09.2<mark>0</mark>22 23.09.2<mark>0</mark>22

. Analysis Completion Date . Sample Tested as Received 27.09.2022

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

< 0.01

INFERENCE

12

As per NAAQS Standards

CPCB Procedure

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

< 0.01

Verified by

Arsenic as As

Thought The Reports

Authorized Signature

< 0.01

6

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



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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018440F

Report Issued Date: 27.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Kallahalli Village

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt Analysis Starting Date

22.09.2022 23.09.2022

Analysis Completion Date

27.09.2022

Sample Tested as Received

	8	Protocols	Shif	t wise resu	ılts	Units	Result	Tolerance limits
S.No	Parameter	Protocols	1	2	3		in Avg.	
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	56.0	55.3	54.7	μg / m³	55.3	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	17.1	16.7	16.0	μg / m³	16.6	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	9.0	8.2	7.5	μg / m³	8.2	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	13.3	12.3	11.8	μg / m³	12.5	80
5	Ozone as O ₃	IS 5182(part-9)1974	12.4	12.0	11.6	μg / m³	12.0	100
6	Lead	IS-5182(Part22) - 2004	0.036	0.042	0.018	μg / m³	0.032	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.48	0.26	0.42	mg/m³	0.39	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	μg / m³	#DIV/0!	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.26	1.38	1.56	ng/m³	1.40	20

INFERENCE

As per NAAQS Standards

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

Verified by

Authorized Signature

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

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E-mail: msvalbellary2016@gmail.com, labmsv@gmail.com Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9600

Report Issued Date: 27.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Kallahalli Village

Name of the location Sample Collected By MSV Analytical Laboratories, Bellary.

3. Particulars of the sample 4.

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

22.09.2022

Analysis Starting Date Analysis Completion Date 23.09.2022 27.09.2022

8. Sample restea as			ft wise res	sults	Units	Result in Avg.	Tolerance limits
Parameter	Protocois	1 2 3	3				
	rc.5182(part 11) -	<0.01	<0.01	<0.01	μg / m ³	<0.01	5
Benzene as C ₆ H ₆	2006	10.02		0.01	ng / m3	<0.01	1
Benzo (α) Pyrene	CPCB Procedure	<0.01	<0.01	<0.01	-	0.01	6
(BaP)	and Durandura	<0.01	< 0.01	< 0.01	ng / m ³	< 0.01	0
	Parameter Benzene as C ₆ H ₆ Benzo (α) Pyrene (BaP)	Benzene as C ₆ H ₆ Benzo (α) Pyrene (BaP) Senzo (α) Pyrene (BaP) Senzo (α) Pyrene (BaP)	ParameterProtocolsShi 1 1Benzene as C ₆ H ₆ IS:5182(part 11) - 2006<0.01	Parameter Protocols Shift wise results and the shift wise results are shift wise results. Benzene as C ₆ H ₆ IS:5182(part 11) - 2006 <0.01	Parameter Protocols Shift wise results 1 2 3 Benzene as C ₆ H ₆ IS:5182(part 11) - 2006 <0.01	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Parameter Protocols Shift wise results Units Results 1 2 3 Units Avg. Benzene as C ₆ H ₆ IS:5182(part 11) – 2006 <0.01

INFERENCE

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

Verified by

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY Report Issued Date: 27.09.2022

Test Report No: TC720722000018441F

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Vysanakere Village

MSV Analytical Laboratories, Bellary. Name of the location Sample Collected By

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

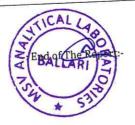
22.09.2022 Date of Sample Receipt 23.09.2022 **Analysis Starting Date** 27.09.2022 **Analysis Completion Date**

	8. Sample Tested as R	Protocols	Shift	wise resul	ts	Units	Result in Avg.	Toleranc e limits
s.No	Parameter	Protocols	1	2	3			
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) - 2006	54.5	53.7	52.6	μg / m³	53.6	100
2	Particulate Matter or	LAB SOP MSVAL/SOP/A/005	16.1	15.5	14.8	μg / m³	15.5	60
3	PM _{2.5} μg/m ³ Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	10.4	9.5	8.9	μg / m³	9.6	80
4	Oxides of Nitrogen as	IS-5182(Part-6) - 2006	15.7	14.6	14.0	μg / m³	14.8	80
*	NOx		9.8	10.6	12.2	$\mu g / m^3$	10.9	100
5_	Ozone as O ₃	IS 5182(part-9)1974		2.226	0.034	μg / m³	0.028	1
6	Lead	IS-5182(Part22) - 2004	0.024	0.026	0.034			-
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.36	0.18	0.22	mg / m³	0.25	2
	CO Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.0.1	<0.01	μg / m³	#DIV/0!	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.42	1.36	1.25	ng / m³	1.34	20

INFERENCE

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

Verified by



Authorized Signature

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9601

Report Issued Date: 27.09.2022

1. Name of the Project .

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

(Metal & Ferro Alloys Plant)

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

Name of the location 2.

Parameter

Benzene as C₆H₆

Benzo (α) Pyrene

Arsenic as As

Vysanakere Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

22.09.2022 23.09.2022

Analysis Completion Date

27.09.2022

Sample Tested as Received

Protocols	Shi	ft wise re	sults Units Result i	Result in Avg.	Tolerance limits	
Protocois	1	2	3			
S:5182(part 11) - 2006	<0.01	<0.01	<0.01	μg / m³	<0.01	5
CPCB Procedure	<0.01	<0.01	<0.01	ng/m³	<0.01	1

< 0.01

INFERENCE

S.No

10

11

12

CPCB Procedure

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

< 0.01

Verified by

(BaP)



< 0.01

Authorized Signature

< 0.01

 ng/m^3

6

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

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018439F

Report Issued Date: 27.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Gunda Village

Name of the location

MSV Analytical Laboratories, Bellary.

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

Date of Sample Receipt

22.09.2022

Analysis Starting Date Analysis Completion Date 7.

23.09.2022 27.09.2022

	8. Sample Tested as R	- 1	Shift	wise resul	ts	Units	Result in Avg.	Tolerance limits
S.No	Parameter	Protocols	1	2	3			0000000
	Particulate Matter	IS-5182(Part-23) -	54.2	53.6	52.4	μg / m³	53.4	100
1	PM ₁₀ μg/m ³	LAB SOP	19.6	19.0	18.5	$\mu g / m^3$	19.0	60
2	Particulate Matter or PM _{2.5} µg/m ³	MSVAL/SOP/A/005				μg / m³	6.5	80
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	6.1	6.9	6.55	μg / III		
3		IS-5182(Part-6) -	15.8	14.8	14.2	μg / m³	14.9	80
4	Oxides of Nitrogen as NO _*	2006			7.4	μg / m³	7.8	100
276	Ozone as O ₃	IS 5182(part-9)1974	8.3	7.8	7.4			1
5		IS-5182(Part22) -	0.027	0.024	0.019	μg / m ³	0.023	1
6	Lead	2004 LAB SOP	0.26	0.24	0.18	mg/m³	0.26	2
7	Carbon Monoxide as	MSVAL/SOP/A/007	0.36	-	2.01	μg / m³	#DIV/0!	400
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01		4.00	4
0	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.24	1.52	ng/m³	1.37	20

INFERENCE

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

Verified b

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

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9599

Report Issued Date: 27.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Gunda Village

3. Sample Collected By MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt 6. Analysis Starting Date

22.09.2022 23.09.2022

Analysis Completion Date

27.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by



Authorized Signature

Vote: 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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TC-7207

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018646F

Report Issued Date: 30.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Smiore Colony

Sample Collected By 3.

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt **Analysis Starting Date**

26.09.2022

Analysis Completion Date

27.09.2022 30.09.2022

Sample Tested as Received

Shift wise results Result Tolerance Units **Protocols** S.No Parameter limits in Avg. 3 1 2 IS-5182(Part-23) -Particulate Matter 100 59.4 62.4 59.6 56.2 $\mu g / m^3$ 1 2006 $PM_{10} \mu g/m^3$ LAB SOP Particulate Matter or 24.8 60 20.5 $\mu g / m^3$ 28.6 25.4 2 MSVAL/SOP/A/005 $PM_{2.5} \mu g/m^3$ IS-5182(Part-2) -16.7 80 15.5 $\mu g / m^3$ Sulphur Dioxide as SOx 18.0 16.6 3 2001 IS-5182(Part-6) -Oxides of Nitrogen as 18.7 80 21.0 19.1 16.0 $\mu g / m^3$ 2006 NO. 11.6 11.8 IS 5182(part-9)1974 10.6 12.4 100 $\mu g / m^3$ Ozone as O₃ 5 IS-5182(Part22) -0.035 1 0.038 0.024 0.042 $\mu g / m^3$ 6 Lead 2004 LAB SOP Carbon Monoxide as 0.38 2 0.38 0.50 mg/m^3 0.26 7 MSVAL/SOP/A/007 CO LAB SOP 400 < 0.01 < 0.01 < 0.01 $\mu g / m^3$ < 0.01 Ammonia as NH₃ 8 MSVAL/SOP/A/006 LAB SOP 1.36 20 1.24 1.48 ng / m³ 1.36 9 Nickel as Ni MSVAL/SOP/A/008

INFERENCE

As per NAAQS Standards

ed volags for above measured parameter are within the limits Report Status :- The analyz

Authorized Signature

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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9717

Report Issued Date: 30.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

Vya<mark>sa</mark>nakere, H<mark>anumana</mark>halli Village, Hospet Taluk, Bellary District, Karnataka.

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

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample

Sample collected with RDS APM460 and FDS GTI-131

Date of Sample Receipt

26.09.2022

Analysis Starting Date

27.09.2022

Analysis Completion Date

30.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

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



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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018648F

Report Issued Date: 30.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Kallahalli Village

Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of the sample Date of Sample Receipt

Sample collected with RDS APM460 and FDS GTI-131

Analysis Starting Date

26.09.2022 27.09.2022

:

:

Analysis Completion Date

30.09.2022

Sample Tested as Received

S.No	Parameter	Protocols	Shi	ft wise res	ults	Units	Result	Tolerance
3.140	Tarameter	13/1	_1 ,	2	3		in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m³	IS-5182(Part-23) – 2006	60.8	57.6	52.8	μg / m³	57.1	100
2	Particulate Matter or PM _{2.5} μg/m ³	LAB SOP MSVAL/SOP/A/005	23.3	20.4	17.5	μg / m³	20.4	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) – 2001	15.3	14.8	14.5	μg / m³	14.9	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	19.8	16.7	15.4	μg / m³	17.3	80
5	Ozone as O ₃	IS 5182(part-9)1974	7.4	7.2	7.0	μg / m³	7.2	100
6	Lead	IS-5182(Part22) - 2004	0.036	0.027	0.054	μg / m³	0.039	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.36	0.42	0.28	mg/m³	0.35	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	1.02	0.97	1.04	ng / m³	1.01	20

INFERENCE

As per NAAQS Standards

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

Verified by

Authorized Signature

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

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

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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9719

Report Issued Date: 30.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

Vyas<mark>a</mark>nake<mark>re, Hanumana</mark>halli Village, Hospet Taluk, Bellary District, Karnataka.

2. Name of the location

tion : Kallahalli Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt

: 26.09.2022

6. Analysis Starting Date

: 27.09.2022

7. Analysis Completion Date

: 30.09.2022

8. Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

BAUGE THE BAUGE

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



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



TC-7207

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR OUALITY

Test Report No: TC720722000018647F

Report Issued Date: 30.09.2022

1. Name of the Project

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

Vyasanakere, Hanumanahalli Village,

Hospet Taluk, Bellary District, Karnataka.

: Vysanakere Village

:

Name of the location
 Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

1.5%

5. Date of Sample Receipt

26.09.2022

6. Analysis Starting Date

27.09.2022 30.09.2022

7. Analysis Completion Date 8. Sample Tested as Received

S.No	Parameter	Protocols	Shi	ft wise res	ults	Units	Result in Avg.	Toleranc
		- N	1	2	3		ın Avg.	e limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	63.4	60.8	57.4	μg / m³	60.5	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	22.7	19.6	16.6	μg / m³	19.6	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) – 2001	14.2	13.8	13.4	μg / m³	13.8	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	20.8	17.9	15.4	μg / m³	18.0	80
5	Ozone as O ₃	IS 5182(part-9)1974	12.2	10.6	13.4	μg / m³	12.1	100
6	Lead	IS-5182(Part22) - 2004	0.038	0.047	0.026	μg / m³	0.037	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.48	0.52	0.46	mg/m³	0.49	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.0.1	<0.01	μg / m³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.62	1.02	0.97	ng/m³	1.20	20

INFERENCE

As per NAAQS Standards

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

Verified by

END OF ALERAGITY STATE

Authorized Signature

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

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

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

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



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

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

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

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9718

Report Issued Date: 30.09.2022

Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location

Vysanakere Village

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

Date of Sample Receipt

26.09.2022

Analysis Starting Date

27.09.2022

Analysis Completion Date

30.09.2022

Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

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



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

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



TC-7207

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

MSVAL/A/F/16/03

Report Issued Date: 30.09.2022

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: TC720722000018649F

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

1. Name of the Project

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

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

2. Name of the location

: Gunda Village

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of the sample

: Sample collected with RDS APM460 and FDS GTI-131

5. Date of Sample Receipt6. Analysis Starting Date

: 26.09.2022 : 27.09.2022

7. Analysis Completion Date

: 30.09.2022

8. Sample Tested as Received

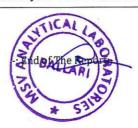
S.No	Parameter	Protocols	Shift wise results			Units	ts	Tolerance
			1	2	3		in Avg.	limits
1	Particulate Matter PM ₁₀ µg/m ³	IS-5182(Part-23) – 2006	60.4	57.6	52.8	μg / m³	56.9	100
2	Particulate Matter or PM _{2.5} µg/m ³	LAB SOP MSVAL/SOP/A/005	24.6	20.8	18.4	μg / m³	21.3	60
3	Sulphur Dioxide as SO _x	IS-5182(Part-2) - 2001	16.9	15.2	14.2	μg / m³	15.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6) – 2006	21.4	17.8	15.3	μg / m³	18.2	80
5	Ozone as O ₃	IS 5182(part-9)1974	15.6	14.8	13.6	μg / m³	14.7	100
6	Lead	IS-5182(Part22) – 2004	0.036	0.028	0.016	μg / m³	0.027	1
7	Carbon Monoxide as	LAB SOP MSVAL/SOP/A/007	0.48	0.52	036	mg/m³	12.33	2
8	Ammonia as NH₃	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	1.27	1.09	ng/m³	1.24	20

INFERENCE

As per NAAQS Standards

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

Verified by



Authorized Signature

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

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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Sanganakallu Road, KEB Circle, Bellary-583103. Contact No: Mob: 94498 03895, (0): 08392-255169,
E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2022/9720

Report Issued Date: 30.09.2022

1. Name of the Project

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

(Metal & Ferro Alloys Plant)

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

Name of the location
 Sample Collected By

: Gunda Village

nnlo

. Particulars of the sample

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

5. Date of Sample Receipt6. Analysis Starting Date

: 26.09.2022 : 27.09.2022

7. Analysis Completion Date

: 30.09.2022

8. Sample Tested as Received

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

INFERENCE

As per NAAQS Standards

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

Verified by

TICAL LAPORTE

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



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



MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000018347F

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Report Issued Date: 27.09.2022

1. Name of the Industry

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

(Metal & Ferro Alloys Plant)

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

2. Stack ID

: Coke Screening & Store

3. Sample Collected By

: MSV Analytical Laboratories, Bellary.

4. Particulars of Sample Collected

Sample collected with VSS - 1

5. Date of Sample Receipt6. Analysis Starting Date

: 21.09.2022 : 22.09.2022

7. Analysis Completion Date

27.09.2022

8. Sample Tested as Received

GENERAL DETAILS

GENERALI	JE I AILS
Date of Monitoring	21.09.2022
Fuel Used	
Stack Temperature (°C)	68
Velocity (m/s)	6.9
Height (m)	15mtrs AGL
Diameter (m)	0.7
Cross sectional area (m ²)	0.38465

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm³	36.8	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm³	12.6	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm³	16.9	500
Carbon Monoxide as(CO)	IS 13270	%	0.46	Max 1%

INFERENCE

As per GSR 277 (E) Standards.

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

within the in

Verified by

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

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

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

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



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000018346F

Report Issued Date: 27.09.2022

Name of the Industry

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

(Metal & Ferro Alloys Plant)

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

2. Stack ID

Coke Cutter

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of Sample Collected 4.

Sample collected with VSS - 1

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

21.09.2022 22.09.2022

7. **Analysis Completion Date**

27.09.2022

8. Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	<u>DETAILS</u>
Fuel Used	21.09.2022
	<u> </u>
Stack Temperature (°C)	73
Velocity (m/s)	6.8
Height (m)	15mtrs AGL
Diameter (m)	0.7
Cross sectional area (m²)	0.38465
DECES	

RESULTS

Parameters Particulate Matter	Protocol	Unit	Result	GSR 277 (E) Standards
	IS-11255(Part1) - 1985	mg/Nm³	36.8	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm³	13,6	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm³	16.9	
Carbon Monoxide as(CO)	IS 13270	%	10.9	500
			0.24	Max 1%

INFERENCE

As per KSPCB Standards

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

Verified by



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

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

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



MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000017980F

Report Issued Date: 27.09.2022

1. Name of the Industry

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

Vyasanakere, Hanumanahalli Village,

Hospet Taluk, Bellary District, Karnataka.

2. Stack ID

Coal Crushing Area

3. Sample Collected By Particulars of Sample Collected 4.

MSV Analytical Laboratories, Bellary.

5. Date of Sample Receipt Sample collected with VSS - 1 13.09.2022

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

14.09.2022 17.09.2022

Sample Tested as Received

GENERAL DETAILS

GENERAL DET	AILS
Date of Monitoring	13.09.2022
Fuel Used	77.7.
Stack Temperature (°C)	<i>A</i> 1
Velocity (m/s)	6.4
Height (m)	6.4
Diameter (m)	15mtrs AGL
Cross sectional area (m²)	0.75
	0.44156
DECITION	

RESULTS

Protocol	Unit	Result	GSR 277 (E) Standards
	mg/Nm³	32.6	50
	mg/Nm³	15.2	800
IS-11255(Part7) - 2005		125 105 L	
IS 13270	%		500 Max 1%
	Protocol IS-11255(Part1) - 1985 IS-11255(Part2) - 1985 IS-11255(Part7) - 2005	Protocol Unit IS-11255(Part1) - 1985 mg/Nm³ IS-11255(Part2) - 1985 mg/Nm³ IS-11255(Part7) - 2005 mg/Nm³	IS-11255(Part1) - 1985 mg/Nm³ 32.6 IS-11255(Part2) - 1985 mg/Nm³ 15.2 IS-11255(Part7) - 2005 mg/Nm³ 20.4

INFERENCE

As per KSPCB Standards

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

Verified by

Authorized Signature

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

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 & Thimbies will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000018345F

Report Issued Date: 27.09.2022

Name of the Industry

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

(Metal & Ferro Alloys Plant)

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

2. Stack ID

DG Set 750 KVA

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of Sample Collected 4.

Sample collected with VSS - 1

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

21.09.2022

Analysis Completion Date 7. Sample Tested as Received 8.

22.09.2022 27.09.2022

GENERAL DETAILS

<u>DETAILS</u>
21.09.2022
Diesel
97
6.8
15mtrs AGL
0.3
0.07065

RESULTS

Parameters	Protocol	Unit	Result	KSPCB Consent
Particulate Matter	IS-11255(Part1) - 1985		V XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	Standards
Sulphur dioxide		mg/Nm³	43.8	100
	IS-11255(Part2) - 1985	PPM	17.6	50
Nitrogen dioxide	IS-11255(Part7) - 2005	DDM		30
	2003	PPM	20.6	50

INFERENCE

As per KSPCB Consent Standards.

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

Verified by

ote: 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

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



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

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TTC720722000018282F

Report Issued Date: 27.09.2022

Name of the Industry 1.

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

(Metal & Ferro Alloys Plant)

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

2. Stack ID Coke Oven Battery - Passes Through WHRB-1

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

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

Sample collected with VSS - 1

6. **Analysis Starting Date**

16.09.2022 17.09.2022

Analysis Completion Date 7.

23.09.2022

8. Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	DETAILS
	16.09.2022
Fuel Used	
Stack Temperature (°C)	81
Velocity (m/s)	6.9
Height (m)	M Section 1
Diameter (m)	60 mtrs AGL
Cross sectional area (m²)	3.4
or oss sectional area (III-)	9.0746

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm³	42.2	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm³	18.8	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm³	21.4	
Carbon Monoxide as(CO)	IS 13270	%	0.36	500 Max 1%

INFERENCE

As per GSR 277 (E) Standards.

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

Verified by

Authorized Signature

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

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

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

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



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

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000017981F

Report Issued Date: 27.09.2022

Name of the Industry

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

(Metal & Ferro Alloys Plant)

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

2. Stack ID

Ferro Alloy Arc Furnace

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

Particulars of Sample Collected 4.

Sample collected with VSS - 1

Date of Sample Receipt 5. 6.

13.09.2022

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

14.09.2022 17.09.2022

Sample Tested as Received

GENERAL DETAILS

<u>DETAILS</u>		
13.09.022		
- Fair 1		
87		
7.2 35 mtrs AGL 2.5		
		4.90625
		֡֡֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜

	RESUL	TS		
Parameters	Protocol	Unit	Result	GSR 277 (E)
Particulate Matter	IS-11255(Part1) - 1985	-		Standards
	10 11205(1 alt1) - 1905	mg/Nm³	42.6	150

INFERENCE

As per GSR 277 (E) Standards.

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

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

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

^{3.} This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing. 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.

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



Recognition by MoEF under Environment (Protection) Act, 1986 and Accredited by NABL (Certified by ISO-14001-2015,ISO 22000-2018, ISO 45001-2018,ISO 9001-2015) C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor)

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



MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMMISSION

Test Report No: TC720722000018281F

Report Issued Date: 27.09.2022

Name of the Industry

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

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village,

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

3. Sample Collected By MSV Analytical Laboratories, Bellary. Particulars of Sample Collected

4. Sample collected with VSS - 1 5.

Date of Sample Receipt 16.09.2022 6. **Analysis Starting Date** 7. **Analysis Completion Date** . 17.09.2022 23.09.2022

8. Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	<u>DETAILS</u>		
Fuel Used	16.09.2022		
Stack Temperature (°C)	1		
Velocity (m/s)	7.2		
Height (m)			
Diameter (m)	60 mtrs AGL		
Cross sectional area (m²)	3.4		
Provi	9.0746		

RESULTS

Parameters	Protocol	Unit	D	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985		Result	
Sulphur dioxide		mg/Nm³	41.6	50
Nitrogen dioxide	IS-11255(Part2) - 1985	mg/Nm³	32.3	800
Carbon Monoxide	IS-11255(Part7) - 2005	mg/Nm ³	36.8	500
as(CO)	IS 13270	0/		300
u3(CO)		%	0.48	Max 1%

INFERENCE

As per GSR 277 (E) Standards.

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

Verified by



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

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

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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9382

Report Issued Date: 21.09.2022

Name of the Industry 1.

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

(Metal & Ferro Alloys Plant)

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

Name of the sample 2. Sample Collected By 3.

MSV Analytical Laboratories

Sample Quantity

2 Liters

4. Sample Description/condition 5.

Good/Satisfactory

Date of Sample Receipt 6.

14.09.2022 15.09.2022

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

21.09.2022

S.No	9. Sample tested As Rec	Protocol	Unit	Result	Standards as per IS - 2296
		Physical paramete	rs		
1	Taste	IS: 3025(part-7)	/ /	Agreeable	Agreeable
1	Color	IS: 3025(part-4)		<5	10
2	Color	· · · · · · · · · · · · · · · · · · ·		Un	Un
3	Odor	IS: 3025(part-5)	i u	objectionable	objectionable
	T_T	IS: 3025(part-11)		7.26	6.5-8.5
4	pH C. Justivity	IS-3025 (part 14)	μs/cm	778	
5	Conductivity	Chemical paramete			
	m . ID: 1 - 1 C-lide	IS: 3025(part-16)	mg/l	386	500
6	Total Dissolved Solids	IS: 3025(part-40)	mg/l	30.3	80.10
7	Calcium as Ca	IS: 3025(part-21)	mg/l	102.4	300
8	Total Hardness as CaCO ₃	IS: 3025(part-21)	mg/l	6.47	24.28
9	Magnesium as Mg	IS: 3025(part-39)	mg/l	Nil	
10	Oil &Grease	APHA 23 rd EDITION -			0.01
11	Mineral Oil	5520 C	mg/l	Nil	0.01
			mg/l	26.8	400
12	Sulphate as SO ₄	IS: 3025(part-24)	mg/l	112.9	250
13	Chloride as Cl	IS: 3025(part-32)	mg/l	2.03	20
14	Nitrate as NO ₃	IS: 3025(part-34)	mg/l	0.003	0.3
15	Iron as Fe	IS: 3025(part-53)		0.18	1.50
16	Fluoride as F	IS: 3025(part-60)	mg/l	0.10	
17	Bio-chemical Oxygen Demand (3 days at 27°C),	IS 3025 (Part 44): 1993	mg/l	Nil	2
	Max	10 2025 (Dowt 20), 1002	mg/l	6.94	Min 6
18	Dissolved Oxygen	IS 3025 (Part 38): 1993	mg/l	Nil	
19	Free CO2	LAB SOP	mg/l	Nil	200
20	Free Ammonia	LAB SOP	1118/1	1111	

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

Report Status: - The above paramete

Verified by

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



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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9382

Report Issued Date: 21.09.2022 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 - Pond Water Ayyanahalli

Name of the sample 2.

Sample Collected By 3.

MSV Analytical Laboratories

Sample Quantity 4.

2 Liters Good/Satisfactory

Sample Description/condition 5. **Date of Sample Receipt** 6.

14.09.2022

Analysis Starting Date 7.

15.09.2022

Analysis Completion date 8.

21.09.2022

S.No	9. Sample tested As I Parameters	Protocol	Unit	Result	Standards as per IS - 2296			
Unito	Chemical parameters							
	N	APHA 23 rd EDITION -3111 B	mg/l	0.026	0.5			
21	Manganese as Mn	IS: 3025(part-49)	mg/l	0.024	15			
22	Zinc as Zn	APHA 23 rd EDITION -4500 B	mg/l	Nil				
23	Boron as B	APHA 23 rd EDITION -3500 Ba	mg/l	0.002	1.0			
24	Barium as Ba	APHA 23 rd EDITION -3500 Ag	mg/l	< 0.001	0.05			
25	Silver as Ag	APHA 23 rd EDITION -3300 Ag APHA 23 rd EDITION -3112 B	mg/l	< 0.002	0.05			
26	Arsenic as As		mg/l	< 0.001	0.001			
27	Mercury as Hg	APHA 23rd EDITION -3112 B	mg/l	<0.002	0.1			
28	Lead as Pb	APHA 23 rd EDITION -3111 B		< 0.001	0.01			
29	Cadmium as Cd	APHA 23 rd EDITION -3111 B	mg/l	<0.002	0.05			
30	Chromium as Cr	APHA 23 rd EDITION -3111 B	mg/l	<0.001	0.01			
31	Selenium as Se	APHA 23 rd EDITION -3500 B	mg/l	Nil	0.05			
32	Cyanide as CN	APHA 23 rd EDITION -4500 D	mg/l		0.002			
33	Phenols	IS: 3025(part-43)	mg/l	Nil				
34	Anionic Detergents as MBAS	IS: 13428-2005	mg/l	<0.1	0.2			
35	Percent Sodium	LAB SOP	%	22.6				
36	Sodium Absorption Ratio	LAB SOP	mg/l	13.2				

INFERENCE

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

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



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

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/9382

(B) CF (CF)

Report Issued Date: 21.09.2022

1. Name of the Industry

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

Vyasanakere, Hanumanahalli Village,

2. Sample Type

Hospet Taluk, Bellary District, Karnataka.

3. Sample Collected By

Surface water - Pond Water AyyanahalliMSV Analytical Laboratories, Bellary.

4. Sample Quantity

: 250 ml (Sterilized Bottle)

5. Sample description/condition

: Good/satisfactory

6. Date of sample Receipt

: 14.09.2022 : 15.09.2022

7. Analysis Starting Date8. Analysis Completion Date

: 21.09.2022

9. Sample tested as Received

RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS - 2296
	4	NEDNI /4.00 1	10	50
Total Coliform	IS 1622:1981	MPN/100 ml	10	

INFERENCE

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

Verified by

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



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E-mail: msv.lab01@gmail.com, Labmsv@gmail.com, Website: www.msvalbellary@gvAL/W/F/13/00

ANALYSIS REPORT OF WATER OUALITY

Test Report No: MSVAL/2022/9378

Report Issued Date: 21.09.2022

Name of the Industry 1.

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

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

Name of the sample 2.

Surface water - Tungabhadra Reservoir MSV Analytical Laboratories

Sample Collected By 3. Sample Quantity 4.

2 Liters

Sample Description/condition 5.

Good/Satisfactory 14.09.2022

Date of Sample Receipt 6. **Analysis Starting Date** 7. **Analysis Completion date** 8.

15.09.2022 21.09.2022

	9. Sample tested As Rec	ceived			Standards as per
S.No	Parameters	Protocol	Unit	Result	IS - 2296
		Physical paramete	rs		
1	Taste	IS: 3025(part-7)		Agreeable	Agreeable
2	Color	IS: 3025(part-4)		<1	10
3	Odor	IS: 3025(part-5)		Un objectionable	Un objectionable
4	рН	IS: 3025(part-11)	/ / 	7.36	6.5-8.5
5	Conductivity	IS-3025 (part 14)	μs/cm	1326	
<u> </u>	Conductivity	Chemical parameter	ers		
6	Total Dissolved Solids	IS: 3025(part-16)	mg/l	724	500
7	Calcium as Ca	IS: 3025(part-40)	mg/l	36.4	80.10
8	Total Hardness as CaCO ₃	IS: 3025(part-21)	mg/l	172.8	300
9	Magnesium as Mg	IS: 3025(part-46)	mg/l	19.8	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	20.2	400
13	Chloride as Cl	IS:3025(part-32)	mg/l	66.9	250
14	Nitrate as NO ₃	IS:3025(part-34)	mg/l	2.02	20
15	Iron as Fe	IS:3025(part-53)	mg/l	0.06	0.3
16	Fluoride as F	IS:3025(part-60)	mg/l	0.22	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	6.74	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.

Verified by

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



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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9378

Report Issued Date: 21.09.2022

Name of the Industry 1.

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

(Metal & Ferro Alloys Plant)

Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka. Surface water - Tungabhadra Reservoir

Name of the sample 2.

MSV Analytical Laboratories

Sample Collected By 3.

Sample Quantity 4.

Sample Description/condition 5.

Good/Satisfactory 14.09.2022

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

Analysis Completion date 8.

15.09.2022 21.09.2022

S.No	9. Sample tested As I Parameters	Protocol	Unit	Result	Standards as per IS - 2296
		Chemical parameters			
21	Manganese as Mn	APHA 23 rd EDITION -3111 B	mg/l	0.018	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.014	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	IS: 13428-2005	mg/l	<0.1	0.2
35	Percent Sodium	LAB SOP	%	15.8	
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.

Verified by

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



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/9378

Report Issued Date: 21.09.2022

1. Name of the Industry

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

(Metal & Ferro Alloys Plant)

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

2. Sample Type

Surface water - Tungabhadra Reservoir

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Sample Quantity

250 ml (Sterilized Bottle)

5. Sample description/condition

Good/satisfactory

6. Date of sample Receipt

14.09.2022

7. Analysis Starting Date

: 15.09.2022

8. Analysis Completion Date

21.09.2022

9. Sample tested as Received

RESULTS

	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
7	Total Coliform	IS 1622:1981	MPN/100 ml	8	50

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

Verified by

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



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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9379

Report Issued Date: 21.09.2022

Name of the Industry 1.

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

(Metal & Ferro Alloys Plant)

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

Name of the sample 2.

MSV Analytical Laboratories

Sample Collected By 3. Sample Quantity 4.

2 Liters

Sample Description/condition 5.

Good/Satisfactory

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

14.09.2022 15.09.2022

7. **Analysis Completion date** 8.

21.09.2022

Sample tested As Received

	9. Sample tested As Rec		Timia	Result	Standards as per
S.No	Parameters	Protocol	Unit	Result	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)	kr.	Un objectionable	Un objectionable
4	рН	IS: 3025(part-11)	S=##	7.26	6.5-8.5
5	Conductivity	IS-3025 (part 14)	μs/cm	994	
3	Conductivity	Chemical paramete	ers		
6	Total Dissolved Solids	IS: 3025(part-16)	mg/l	488	500
7	Calcium as Ca	IS: 3025(part-40)	mg/l	23.8	80.10
8	Total Hardness as CaCO ₃	IS: 3025(part-21)	mg/l	93.8	300
9	Magnesium as Mg	IS: 3025(part-46)	mg/l	8.33	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	13.4	400
13	Chloride as Cl	IS: 3025(part-32)	mg/l	36.9	250
14	Nitrate as NO ₃	IS: 3025(part-34)	mg/l	0.48	20
15	Iron as Fe	IS: 3025(part-53)	mg/l	Nil	0.3
16	Fluoride as F	IS: 3025(part-60)	mg/l	0.16	1.50
17	Bio-chemical Oxygen Demand (3 days at 27°C), Max	IS 3025 (Part 44): 1993	mg/l	Nil	2
10	Dissolved Oxygen	IS 3025 (Part 38): 1993	mg/l	6.55	Min 6
18	Free CO2	LAB SOP	mg/l	Nil	
19 20	Free CO2 Free Ammonia	LAB SOP	mg/l	Nil	

INFERENCE

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

Verified by

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



1.

MSV Analytical Laboratories

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

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

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

MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9379

Name of the Industry :

Report Issued Date: 21.09.2022

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

2. Name of the sample : 3. Sample Collected By :

4. Sample Collected By

5. Sample Quantity

6. Date of Sample Receipt7. Analysis Starting Date8. Analysis Completion date

MSV Analytical Laboratories 2 Liters

Good/Satisfactory 14.09.2022

15.09.2022 21.09.2022

S.No	9. Sample tested As Parameters	Protocol	Unit	Result	Standards as per IS - 2296
		Chemical parameters	l		
21	Manganese as Mn	APHA 23 rd EDITION -3111 B	mg/l	0.024	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	%	16.3	1252
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.

Verified by

**End of the Report*

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



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

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/9379

Report Issued Date: 21.09.2022

1. Name of the Industry

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

(Metal & Ferro Alloys Plant)

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

2. Sample Type 3. Sample Collected By

4. Sample Quantity

MSV Analytical Laboratories, Bellary. 250 ml (Sterilized Bottle)

Good/satisfactory

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

14.09.2022

7. Analysis Starting Date

15.09.2022

8. Analysis Completion Date

21.09.2022

9. Sample tested as Received

RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS - 2296
And the second s	*** 1 400 1001	MDM /100 ml	15	50
Total Coliform	IS 1622:1981	MPN/100 ml		

INFERENCE

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

Verified by

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



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MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9380

Report Issued Date: 21.09.2022

Name of the Industry 1.

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

(Metal & Ferro Alloys Plant)

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

Name of the sample 2.

MSV Analytical Laboratories

Sample Collected By 3. Sample Quantity 4.

2 Liters

Sample Description/condition 5.

Good/Satisfactory

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

14.09.2022 15.09.2022

Analysis Completion date 8.

21.09.2022

S.No	9. Sample tested As Rec 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)		Un objectionable	Un objectionable
1	рН	IS:3025(part-11)		6.88	6.5-8.5
5	Conductivity	IS-3025 (part 14)	μs/cm	886	
5	Conductivity	Chemical paramete	ers		
	Total Dissolved Solids	IS: 3025(part-16)	mg/l	414	500
6	Calcium as Ca	IS: 3025(part-40)	mg/l	22.6	80.10
7		IS: 3025(part-21)	mg/l	80.2	300
88	Total Hardness as CaCO ₃	IS: 3025(part-46)	mg/l	5.75	24.28
9	Magnesium as Mg	IS: 3025(part-39)	mg/l	Nil	
10 11	Oil &Grease Mineral Oil	APHA 23 rd EDITION - 5520 C	mg/l	Nil	0.01
2000000	6.1.1	IS: 3025(part-24)	mg/l	26.8	400
12	Sulphate as SO ₄	IS: 3025(part-32)	mg/l	56.9	250
13	Chloride as Cl	IS: 3025(part-34)	mg/l	1.36	20
14	Nitrate as NO ₃	IS: 3025(part-53)	mg/l	0.002	0.3
15	Iron as Fe	IS: 3025(part-60)	mg/l	0.28	1.50
16 17	Fluoride as F Bio-chemical Oxygen Demand (3 days at 27°C),	IS 3025 (Part 44): 1993	mg/l	Nil	2
40	Max	IS 3025 (Part 38): 1993	mg/l	6.28	Min 6
18	Dissolved Oxygen	LAB SOP	mg/l	Nil	
19 20	Free CO2 Free Ammonia	LAB SOP	mg/l	Nil	

INFERENCE

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

Verified by

Authorized Signature

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



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MSVAL/W/F/13/00

Standards as

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9380

Report Issued Date: 21.09.2022

Name of the Industry 1.

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

(Metal & Ferro Alloys Plant)

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

Name of the sample 2.

8.

Surface water - Dhananayakana Kere Water MSV Analytical Laboratories

Sample Collected By 3. Sample Quantity

2 Liters

4. Sample Description/condition 5.

Good/Satisfactory

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

14.09.2022 15.09.2022

Analysis Completion date

21.09.2022

	9. Sample tested	As Received				
S.No	Parameters	Protocol	Unit	Result		
	Chemical parameters					
	272	ADMA OO M EDITION 2111 D	ma/1	0.012		

S.No	Parameters	Protocol	Unit	Result	per IS - 2296
		Chemical parameters			
21	Manganese as Mn	APHA 23 rd EDITION -3111 B	mg/l	0.012	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.020	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
1	Arsenic as As	APHA 23 rdEDITION -3112 B	mg/l	< 0.002	0.05
26		APHA 23rd EDITION -3112 B	mg/l	< 0.001	0.001
27	Mercury as Hg	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.1
28	Lead as Pb	APHA 23 rd EDITION -3111 B	mg/l	< 0.001	0.01
29	Cadmium as Cd	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.05
30	Chromium as Cr	APHA 23 rd EDITION -3500 B	mg/l	< 0.001	0.01
31	Selenium as Se	APHA 23 rd EDITION -4500 D	mg/l	Nil	0.05
32	Cyanide as CN		mg/l	Nil	0.002
33	Phenols	IS: 3025(part-43)		Sept 1	
34	Anionic Detergents as IS: 13428-2005 MBAS		mg/l	<0.1	0.2
35	Percent Sodium	LAB SOP	%	12.6	
36	Sodium Absorption Ratio	LAB SOP	mg/l	7.8	- Solom

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

Report Status: - The above parameters are within limits.

Verified by

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



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/9380

Report Issued Date: 21.09.2022

1. Name of the Industry

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

(Metal & Ferro Alloys Plant)

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

2. Sample Type

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Sample Quantity

250 ml (Sterilized Bottle)

5. Sample description/condition

Good/satisfactory 14.09.2022

6. Date of sample Receipt 7. Analysis Starting Date

: 15.09.2022

8. Analysis Completion Date

: 21.09.2022

9. Sample tested as Received

RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS - 2296
	10.1(22.1001	MPN/100 ml	18	50
Total Coliform	IS 1622:1981	MII IV/ IOO IIII		

INFERENCE

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

Verified by

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MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9381

Report Issued Date: 21.09.2022

1. Name of the Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the sample
 Sample Collected By

Surface water - Water body near Narayadevarakere

: MSV Analytical Laboratories

4. Sample Quantity

2 Liters Good/Satisfactory

5. Sample Description/condition6. Date of Sample Receipt

14.09.2022

7. Analysis Starting Date 8. Analysis Completion date 15.09.2022 21.09.2022

S.No	9. Sample tested As Rec	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)		Un objectionable	Un objectionable
		IS:3025(part-11)		8.14	6.5-8.5
5	pH Conductivity	IS-3025 (part 14)	μs/cm	996	
5	Conductivity	Chemical paramete			
	Total Dissolved Solids	IS: 3025(part-16)	mg/l	536	500
6	Calcium as Ca	IS: 3025(part-40)	mg/l	50.2	80.10
7	Total Hardness as CaCO ₃	IS: 3025(part-21)	mg/l	178.8	300
8		IS: 3025(part-46)	mg/l	12.95	24.28
9	Magnesium as Mg Oil &Grease	IS: 3025(part-39)	mg/l	Nil	
10	Mineral Oil	APHA 23 rd EDITION - 5520 C	mg/l	Nil	0.01
12	Sulphate as SO ₄	IS: 3025(part-24)	mg/l	30.2	400
13	Chloride as Cl	IS: 3025(part-32)	mg/l	114.9	250
14	Nitrate as NO ₃	IS: 3025(part-34)	mg/l	0.68	20
15	Iron as Fe	IS: 3025(part-53)	mg/l	0.06	0.3
16	Fluoride as F	IS: 3025(part-60)	mg/l	0.24	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	6.88	Min 6
	Free CO2	LAB SOP	mg/l	Nil	
19 20	Free COZ Free Ammonia	LAB SOP	mg/l	Nil	

INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

Report Status: - The above parameters are within limits.

Verified by

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MSVAL/W/F/13/00

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9381

Report Issued Date: 21.09.2022 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.

Name of the sample 2.

Surface water - Water body near

Narayadevarakere

Sample Collected By 3.

MSV Analytical Laboratories

Sample Quantity 4.

6

2 Liters

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

Good/Satisfactory 14.09.2022

21.09.2022

Analysis Starting Date 7.

15.09.2022

Analysis Completion date 8.

S.No	9. Sample tested As I Parameters	Protocol	Unit	Result	Standards as per IS - 2296
		Chemical parameters			
21	Manganese as Mn	APHA 23 rd EDITION -3111 B	mg/l	0.024	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.030	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
	Silver as Ag	APHA 23 rd EDITION -3500 Ag	mg/l	< 0.001	0.05
25	Arsenic as As	APHA 23 rdEDITION -3112 B	mg/l	< 0.002	0.05
26		APHA 23rd EDITION -3112 B	mg/l	< 0.001	0.001
27	Mercury as Hg Lead as Pb	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.1
28		APHA 23 rd EDITION -3111 B	mg/l	< 0.001	0.01
29	Cadmium as Cd	APHA 23 rd EDITION -3111 B	mg/l	< 0.002	0.05
30	Chromium as Cr	APHA 23 rd EDITION -3500 B	mg/l	< 0.001	0.01
31	Selenium as Se	APHA 23 rd EDITION -4500 D	mg/l	Nil	0.05
32	Cyanide as CN	IS: 3025(part-43)	mg/l	Nil	0.002
33	Phenols	15: 3023(part-43)	mg/l	7/81 01	0.2
34	Anionic Detergents as MBAS	IS: 13428-2005		<0.1	0.2
35	Percent Sodium	LAB SOP	%	18.6	
36	Sodium Absorption Ratio	LAB SOP	mg/l	12.2	***

INFERENCE

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

Verified by

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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No: MSVAL/2022/9381

Report Issued Date: 21.09.2022

1. Name of the Industry

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

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

Hospet Taluk, Bellary District, Karnataka.

2. Sample Type

Surface water - Water body near Narayadevarakere

3. Sample Collected By

MSV Analytical Laboratories, Bellary.

4. Sample Quantity

250 ml (Sterilized Bottle)

5. Sample description/condition

Good/satisfactory

6. Date of sample Receipt 7. Analysis Starting Date

14.09.2022 : 15.09.2022

8. Analysis Completion Date

21.09.2022

9. Sample tested as Received

RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS - 2296
1 41 41111	The second secon		24	50
Total Coliform	IS 1622:1981	MPN/100 ml	24	

INFERENCE

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

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



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MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/9383

Report Issued Date: 21.09.2022

Name of the Industry

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

(Metal & Ferro Alloys Plant)

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

Name of the sample location 2.

Cooling Tower

Sample Collected By 3.

MSV Analytical Laboratories, Bellary

4. Sample Quantity 2 Liters

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

Good/satisfactory

Analysis Starting Date 7.

14.09.2022 15.09.2022

Analysis completion Date 8.

21.09.2022

Sample Tested as Received 9.

S.No	Parameters	Protocols	Units	Results	Max std limits As per GSR 422 E & KSPCB
		IS: 3025(part-11)		7.26	6.0-9.0
_1	рН	IS: 3025(part -4)	Hazen	5	5-25
2	Color			Agreeable	Agreeable
3	Odour	IS: 3025(part-5)			100
4	Total Suspended Solids	IS 3025 (P-17)	mg/l	14	
5	Oil & Grease	IS: 3025(part-39)	mg/l	2	10
6	Total Chromium as Cr	IS: 3025(part-52)	mg/l	0.06	2.0
	Total Dissolved Solids	IS: 3025(part-16)	mg/l	1968	2100
7		IS:3025(part-31)	mg/l	2.36	5.0
8	Dissolve Phosphate as P		The second secon	40	30
9	Bio chemical Oxygen Demand	IS: 3025(part-44)	mg/l	10	
10	Chemical Oxygen Demand	IS: 3025(part-58)	mg/l	30	250
11	Residual Free Chlorine	IS: 3025(part-26)	mg/l	Nil	1.0

INFERENCE

as per GSR 422 E & KSPCB Standards

Report Status: - Measured values for all the parameters are within the limits.

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