



MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986

(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, (O) : 08392-255169,

E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1.	Name of the Industry	:	M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)
2.	Address	:	Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
3.	Sample Collected By	:	MSV Analytical laboratories, Bellary.
4.	Particulars of Sample Collected	:	RDS-460BL, FPS-APM 550
5.	Month of Collection	:	April-2022
6.	Name of the location	:	Smiore Colony
7.	Report Issued Date	:	02.05.2022

Weeks	PARAMETERS & THEIR MAXIMUM STANDARDS		PM ₁₀ [µg/m ³]	PM _{2.5} [µg/m ³]	SO ₂ [µg/m ³]	NO ₂ [µg/m ³]	Ammonia [NH ₃] [µg/m ³]	Ozone [O ₃] [µg/m ³]
			MAX STD	MAX STD	MAX STD	MAX STD	MAX STD	MAX STD
			100	60	80	80	400	180
	Protocols		IS-5182 (P-6) - 2006	LAB SOP	IS 5182 (P-9) 1974	IS-5182 (P-23) -2006	LAB SOP	IS-5182 (P-2) -2001
	Report Number	Date of Sampling	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
I st	MSVAL/2022/3728	04.04.22	55.1	17.3	9.9	13.7	Nil	9.0
	MSVAL/2022/4013	08.04.22	59.1	27.9	10.1	19.2	Nil	8.3
II nd	MSVAL/2022/4243	13.04.22	58.1	30.2	10.0	17.9	Nil	8.9
	MSVAL/2022/4352	16.02.22	55.2	26.4	11.3	15.2	Nil	7.2
III rd	MSVAL/2022/4657	20.04.22	72.0	24.2	20.7	22.9	Nil	12.4
	MSVAL/2022/4741	23.04.22	55.5	28.5	9.5	18.2	Nil	8.7
IV th	MSVAL/2022/4789	26.04.22	56.4	29.5	10.3	19.3	Nil	9.3
	MSVAL/2022/4832	29.04.22	54.1	24.2	11.3	17.6	Nil	8.2

Weeks	PARAMETERS & THEIR MAXIMUM STANDARDS		Lead [Pb] [µg/m ³]	Nickel [Ni] [ng/m ³]	Arsenic [As] [ng/m ³]	Benzene [C ₆ H ₆] [µg/m ³]	Benzo(a)pyrene [Bap] [ng/m ³]	Carbon Monoxide [CO] [mg/m ³]
			MAX STD	MAX STD	MAX STD	MAX STD	MAX STD	MAX STD
			1.0	20	06	5.0	1.0	4.0
	Protocols		IS:5182 (P 11) - 2006	CPCB Procedure	LAB SOP	IS-5182 (P-2) - 2004	LAB SOP	CPCB Procedure
	REPORT NUMBER	Date of Sampling	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
I st	MSVAL/2022/3728	04.04.22	0.025	1.26	<0.5	<1.0	<0.5	0.36
	MSVAL/2022/4013	08.04.22	0.024	1.07	<0.5	<1.0	<0.5	0.31
II nd	MSVAL/2021/4243	13.04.222	0.023	1.02	<0.5	<1.0	<0.5	0.32
	MSVAL/2022/4352	16.02.22	0.023	1.12	<0.5	<1.0	<0.5	0.28
III rd	MSVAL/2022/4657	2004.22	0.036	1.3	<0.5	<1.0	<0.5	0.48
	MSVAL/2022/4741	23.04.22	0.023	1.11	<0.5	<1.0	<0.5	0.20
IV th	MSVAL/2022/4789	26.04.22	0.027	1.14	<0.5	<1.0	<0.5	0.25
	MSVAL/2022/4832	29.04.22	0.025	1.10	<0.5	<1.0	<0.5	0.28

INFERENCE	As per NAAQ Standards Report Status: Measured values For the above parameters are within the limit.
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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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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1.	Name of the Industry	:	M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)
2.	Address	:	Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
3.	Sample Collected By	:	MSV Analytical laboratories, Bellary.
4.	Particulars of Sample Collected	:	RDS-460BL, FPS-APM 550
5.	Month of Collection	:	April-2022
6.	Name of the location	:	Kallahalli Village
7.	Report Issued Date	:	02.05.2022

Weeks	PARAMETERS & THEIR MAXIMUM STANDARS		PM ₁₀ [µg/m ³]	PM _{2.5} [µg/m ³]	SO ₂ [µg/m ³]	NO ₂ [µg/m ³]	Ammonia [NH ₃] [µg/m ³]	Ozone [O ₃] [µg/m ³]
			MAX STD	MAX STD	MAX STD	MAX STD	MAX STD	MAX STD
			100	60	80	80	400	180
	Protocols		IS-5182 (P-6) - 2006	LAB SOP	IS 5182 (P-9) 1974	IS-5182 (P-23) -2006	LAB SOP	IS-5182 (P-2) -2001
	Report Number	Date of Sampling	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
I st	MSVAL/2022/3831	04.04.22	51.2	15.4	7.4	14.9	Nil	8.6
	MSVAL/2022/4016	08.04.22	53.1	16.9	7.5	13.8	Nil	8.2
II nd	MSVAL/2022/4246	13.04.22	58.0	19.8	10.5	16.3	Nil	8.5
	MSVAL/2022/4353	16.02.22	54.1	17.6	13.2	15.4	Nil	7.2
III rd	MSVAL/2022/4659	20.04.22	59.9	24.0	16.8	19.9	Nil	10.0
	MSVAL/2022/4743	23.04.22	54.3	17.4	7.3	15.0	Nil	8.4
IV th	MSVAL/2022/4791	26.04.22	55.6	18.6	8.1	16.1	Nil	8.2
	MSVAL/2022/4833	29.04.22	53.2	19.4	7.3	15.2	Nil	6.8

Weeks	PARAMETERS & THEIR MAXIMUM STANDARS		Lead [Pb] [µg/m ³]	Nickel [Ni] [ng/m ³]	Arsenic [As] [ng/m ³]	Benzene [C ₆ H ₆] [µg/m ³]	Benzo(a)pyrene [Bap] [ng/m ³]	Carbon Monoxide [CO] [mg/m ³]
			MAX STD	MAX STD	MAX STD	MAX STD	MAX STD	MAX STD
			1.0	20	06	5.0	1.0	4.0
	Protocols		IS:5182 (P 11) - 2006	CPCB Procedure	LAB SOP	IS-5182 (P-2) - 2004	LAB SOP	CPCB Procedure
	REPORT NUMBER	Date of Sampling	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
I st	MSVAL/2022/3831	04.04.22	0.024	1.34	<0.5	<1.0	<0.5	0.46
	MSVAL/2022/4016	08.04.22	0.019	1.20	<0.5	<1.0	<0.5	0.30
II nd	MSVAL/2022/4246	13.04.22	0.020	1.05	<0.5	<1.0	<0.5	0.20
	MSVAL/2022/4353	16.02.22	0.017	1.22	<0.5	<1.0	<0.5	0.29
III rd	MSVAL/2022/4659	20.04.22	0.040	1.24	<0.5	<1.0	<0.5	0.34
	MSVAL/2022/4743	23.04.22	0.021	1.11	<0.5	<1.0	<0.5	0.29
IV th	MSVAL/2022/4791	26.04.22	0.023	1.15	<0.5	<1.0	<0.5	0.35
	MSVAL/2022/4833	29.04.22	0.020	1.32	<0.5	<1.0	<0.5	0.28

INFERENCE As per NAAQ Standards
Report Status: Measured values For the above parameters are within the limit.

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1.	Name of the Industry	:	M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)
2.	Address	:	Vysanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
3.	Sample Collected By	:	MSV Analytical laboratories, Bellary.
4.	Particulars of Sample Collected	:	RDS-460BL, FPS-APM 550
5.	Month of Collection	:	April-2022
6.	Name of the location	:	Vysanakere Village
7.	Report Issued Date	:	02.05.2022

Weeks	PARAMETERS & THEIR MAXIMUM STANDARDS		PM ₁₀ [µg/m ³]	PM _{2.5} [µg/m ³]	SO ₂ [µg/m ³]	NO ₂ [µg/m ³]	Ammonia [NH ₃] [µg/m ³]	Ozone [O ₃] [µg/m ³]
			MAX STD	MAX STD	MAX STD	MAX STD	MAX STD	MAX STD
			100	60	80	80	400	180
	Protocols		IS-5182 (P-6) - 2006	LAB SOP	IS 5182 (P-9) 1974	IS-5182 (P-23) -2006	LAB SOP	IS-5182 (P-2) -2001
	Report Number	Date of Sampling	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
I st	MSVAL/2022/3729	04.04.22	53.2	20.2	9.1	10.7	Nil	7.1
	MSVAL/2022/4014	08.04.22	53.4	18.3	8.0	15.5	Nil	7.8
II nd	MSVAL/2022/4244	13.04.22	51.0	16.4	7.3	14.9	Nil	7.0
	MSVAL/2022/4354	16.02.22	53.0	19.2	11.2	13.6	Nil	8.1
III rd	MSVAL/2022/4658	20.04.22	61.0	16.5	14.9	23.4	Nil	10.4
	MSVAL/2021/4742	23.04.22	52.5	16.2	6.4	14.1	Nil	6.4
IV th	MSVAL/2022/4790	26.04.22	53.4	17.5	7.1	15.5	Nil	7.2
	MSVAL/2022/4834	29.04.22	55.6	19.1	8.1	14.3	Nil	8.2

Weeks	PARAMETERS & THEIR MAXIMUM STANDARDS		Lead [Pb] [µg/m ³]	Nickel [Ni] [ng/m ³]	Arsenic [As] [ng/m ³]	Benzene [C ₆ H ₆] [µg/m ³]	Benzo(a)pyrene [Bap] [ng/m ³]	Carbon Monoxide [CO] [mg/m ³]
			MAX STD	MAX STD	MAX STD	MAX STD	MAX STD	MAX STD
			1.0	20	06	5.0	1.0	4.0
	Protocols		IS:5182 (P 11) - 2006	CPCB Procedure	LAB SOP	IS-5182 (P-2) - 2004	LAB SOP	CPCB Procedure
	REPORT NUMBER	Date of Sampling	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
I st	MSVAL/2022/3729	04.04.22	0.017	1.21	<0.5	<1.0	<0.5	0.18
	MSVAL/2022/4014	08.04.22	0.016	1.20	<0.5	<1.0	<0.5	0.18
II nd	MSVAL/2022/4244	13.04.22	0.016	1.08	<0.5	<1.0	<0.5	0.20
	MSVAL/2022/4354	16.02.22	0.020	1.16	<0.5	<1.0	<0.5	0.18
III rd	MSVAL/2022/4658	20.04.22	0.028	1.24	<0.5	<1.0	<0.5	0.38
	MSVAL/2021/4742	23.04.22	0.014	1.17	<0.5	<1.0	<0.5	0.20
IV th	MSVAL/2022/4790	26.04.22	0.016	1.22	<0.5	<1.0	<0.5	0.26
	MSVAL/2022/4834	29.04.22	0.014	1.09	<0.5	<1.0	<0.5	0.24

INFERENCE	As per NAAQ Standards Report Status: Measured values For the above parameters are within the limit.
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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

1.	Name of the Industry	:	M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant)
2.	Address	:	Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
3.	Sample Collected By	:	MSV Analytical laboratories, Bellary.
4.	Particulars of Sample Collected	:	RDS-460BL, FPS-APM 550
5.	Month of Collection	:	April-2022
6.	Name of the location	:	Gunda Village
7.	Report Issued Date	:	02.05.2022

Weeks	PARAMETERS & THEIR MAXIMUM STANDARDS		PM ₁₀ [µg/m ³]	PM _{2.5} [µg/m ³]	SO ₂ [µg/m ³]	NO ₂ [µg/m ³]	Ammonia [NH ₃] [µg/m ³]	Ozone [O ₃] [µg/m ³]
			MAX STD	MAX STD	MAX STD	MAX STD	MAX STD	MAX STD
			100	60	80	80	400	180
	Protocols		IS-5182 (P-6) - 2006	LAB SOP	IS 5182 (P-9) 1974	IS-5182 (P-23) -2006	LAB SOP	IS-5182 (P-2) -2001
	Report Number	Date of Sampling	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
I st	MSVAL/2022/3730	04.04.22	54.1	17.3	6.4	15.1	Nil	7.9
	MSVAL/2022/4015	08.04.22	56.7	19.1	9.1	15.5	Nil	7.3
II nd	MSVAL/2022/4245	13.04.22	55.1	15.3	7.4	11.8	Nil	7.7
	MSVAL/2022/4355	16.02.22	54.2	14.3	8.1	10.9	Nil	8.6
III rd	MSVAL/2022/4660	20.04.22	59.0	18.1	14.3	18.9	Nil	8.6
	MSVAL/2022/4743	23.04.22	55.4	19.4	8.3	17.3	Nil	7.4
IV th	MSVAL/2022/4792	26.04.22	56.4	20.3	9.3	18.3	Nil	8.4
	MSVAL/2022/4835	29.04.22	53.2	19.7	8.6	16.2	Nil	6.5

Weeks	PARAMETERS & THEIR MAXIMUM STANDARDS		Lead [Pb] [µg/m ³]	Nickel [Ni] [ng/m ³]	Arsenic [As] [ng/m ³]	Benzene [C ₆ H ₆] [µg/m ³]	Benzo(a)pyrene [Bap] [ng/m ³]	Carbon Monoxide [CO] [mg/m ³]
			MAX STD	MAX STD	MAX STD	MAX STD	MAX STD	MAX STD
			1.0	20	06	5.0	1.0	4.0
	Protocols		IS:5182 (P 11) - 2006	CPCB Procedure	LAB SOP	IS-5182 (P-2) - 2004	LAB SOP	CPCB Procedure
	REPORT NUMBER	Date of Sampling	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
I st	MSVAL/2022/3730	04.04.22	0.025	1.26	<0.5	<1.0	<0.5	0.34
	MSVAL/2022/4015	08.04.22	0.023	1.22	<0.5	<1.0	<0.5	0.25
II nd	MSVAL/2022/4245	13.04.22	0.051	1.25	<0.5	<1.0	<0.5	0.16
	MSVAL/2022/4355	16.02.22	0.011	1.09	<0.5	<1.0	<0.5	0.20
III rd	MSVAL/2022/4660	20.04.22	0.024	1.32	<0.5	<1.0	<0.5	0.42
	MSVAL/2022/4743	23.04.22	0.025	1.18	<0.5	<1.0	<0.5	0.19
IV th	MSVAL/2022/4792	26.04.22	0.036	1.31	<0.5	<1.0	<0.5	0.25
	MSVAL/2022/4835	29.04.22	0.024	1.10	<0.5	<1.0	<0.5	0.23

INFERENCE	As per NAAQ Standards Report Status: Measured values For the above parameters are within the limit.
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Authorized Signature

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MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2022/4426

Report Issued Date : 25.04.2022

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village, Hospet Taluk,
Bellary District, Karnataka.
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Name of the Location** : Near ARC Furnace
- Particulars of the sample collected** : Sample collected with High Volume Sampler
- Date of Sample Receipt** : 19.04.2022
- Analysis Starting Date** : 20.04.2022
- Analysis Completion Date** : 25.04.2022
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	672.8	681.2	692.4	µg / m ³	682.1	3000
2	Sulphur Dioxide as SO ₂	CPCB Procedure	20.5	21.2	22.5	µg / m ³	21.4	150
3	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	24.2	25.3	26.5	µg / m ³	25.3	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.02	0.034	0.028	µg / m ³	0.027	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/ 007	561.9	570.1	579.3	µg / m ³	570.4	5000

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

:- END OF REPORT:-



Authorized Signature

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MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2022/4427

Report Issued Date : 25.04.2022

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village, Hospet Taluk,
Bellary District, Karnataka.
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Name of the Location** : Near Power Plant
- Particulars of the sample collected** : Sample collected with High Volume Sampler
- Date of Sample Receipt** : 19.04.2022
- Analysis Starting Date** : 20.04.2022
- Analysis Completion Date** : 25.04.2022
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	658.6	652.3	548.6	µg / m ³	619.8	3000
2	Sulphur Dioxide as SO ₂	CPCB Procedure	22.5	18.4	14.5	µg / m ³	18.4	150
3	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	24.8	20.4	18.1	µg / m ³	21.1	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.037	0.035	0.033	µg / m ³	0.035	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	545.4	548.8	540.6	µg / m ³	544.9	5000

INFERENCE

Standards as per GSR277 (E)

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

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---END OF REPORT---

Authorized Signature

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

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

E-mail : msvallbellary2018@gmail.com, labmsv@gmail.com Website : www.msvallbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2022/4428

Report Issued Date : 25.04.2022

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village, Hospet Taluk,
Bellary District, Karnataka.
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Name of the Location** : Near Coal Shed Area
- Particulars of the sample collected** : Sample collected with High Volume Sampler
- Date of Sample Receipt** : 19.04.2022
- Analysis Starting Date** : 20.04.2022
- Analysis Completion Date** : 25.04.2022
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	526.2	522.8	518.4	$\mu\text{g} / \text{m}^3$	522.4	3000
2	Sulphur Dioxide as SO ₂	CPCB Procedure	18.4	15.5	13.5	$\mu\text{g} / \text{m}^3$	15.8	150
3	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	26.2	23.7	21.1	$\mu\text{g} / \text{m}^3$	23.6	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.038	0.036	0.034	$\mu\text{g} / \text{m}^3$	0.036	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	382.5	388.6	380.8	$\mu\text{g} / \text{m}^3$	383.9	5000

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

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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2022/4429

Report Issued Date : 25.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village, Hospet Taluk,
Bellary District, Karnataka.
2. Sample Collected By : MSV Analytical Laboratories, Bellary.
3. Name of the Location : Near Coke Oven Plant
4. Particulars of the sample collected : Sample collected with High Volume Sampler
5. Date of Sample Receipt : 19.04.2022
6. Analysis Starting Date : 20.04.2022
7. Analysis Completion Date : 25.04.2022
8. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	645.0	644.5	643.8	$\mu\text{g} / \text{m}^3$	644.4	3000
2	Sulphur Dioxide as SO ₂	CPCB Procedure	13.8	13.2	12.8	$\mu\text{g} / \text{m}^3$	13.2	150
3	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	15.0	14.2	13.8	$\mu\text{g} / \text{m}^3$	14.3	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.021	0.020	0.019	$\mu\text{g} / \text{m}^3$	0.02	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	520.8	523.2	519.6	$\mu\text{g} / \text{m}^3$	521.2	5000

INFERENCE	Standards as per GSR277 (E) Report Status: - The analyzed values for above measured parameter are within the limits.
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MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2022/4430

Report Issued Date : 25.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village, Hospet Taluk,
Bellary District, Karnataka.
2. Sample Collected By : MSV Analytical Laboratories, Bellary.
3. Name of the Location : Near Main Gate
4. Particulars of the sample collected : Sample collected with High Volume Sampler
5. Date of Sample Receipt : 19.04.2022
6. Analysis Starting Date : 20.04.2022
7. Analysis Completion Date : 25.04.2022
8. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	637.5	636.4	635.3	$\mu\text{g} / \text{m}^3$	636.4	3000
2	Sulphur Dioxide as SO ₂	CPCB Procedure	12.6	12.2	11.5	$\mu\text{g} / \text{m}^3$	12.1	150
3	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	13.8	13.1	12.5	$\mu\text{g} / \text{m}^3$	13.1	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.018	0.017	0.016	$\mu\text{g} / \text{m}^3$	0.017	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	641.5	642.7	639.3	$\mu\text{g} / \text{m}^3$	641.1	5000

INFERENCE

Standards as per GSR277 (E)

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

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END OF REPORT



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MSVAL/A/F/16/03

ANALYSIS REPORT OF FUGITIVE EMISSION

Test Report No : MSVAL/2022/4431

Report Issued Date : 25.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasankere, Hanumanahalli Village, Hospet Taluk,
Bellary District, Karnataka.
2. Sample Collected By : MSV Analytical Laboratories, Bellary.
3. Name of the Location : Near iron Ore Beneficiation Plant
4. Particulars of the sample collected : Sample collected with High Volume Sampler
5. Date of Sample Receipt : 19.04.2022
6. Analysis Starting Date : 20.04.2022
7. Analysis Completion Date : 25.04.2022
8. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Standards Max Limit GSR277 (E)
			1	2	3			
1	Suspended Particulate Matter	IS-5182(Part-4) -2017	519.0	518.2	517.9	$\mu\text{g} / \text{m}^3$	518.3	3000
2	Sulphur Dioxide as SO ₂	CPCB Procedure	8.8	8.2	7.8	$\mu\text{g} / \text{m}^3$	8.2	150
3	Oxides of Nitrogen as NO _x	IS-5182(Part-6) - 2006	10.6	10.0	9.4	$\mu\text{g} / \text{m}^3$	10	120
4	Lead as Pb	IS-5182 (Part22) - 2004	0.029	0.028	0.027	$\mu\text{g} / \text{m}^3$	0.028	2
5	Carbon Monoxide as CO	MSVAL/SOP/A/007	440.0	441.3	437.8	$\mu\text{g} / \text{m}^3$	439.7	5000

INFERENCE	Standards as per GSR277 (E) Report Status: - The analyzed values for above measured parameter are within the limits.
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E-mail : msvbellary2016@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1709

Report Issued Date: 21.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample location : R.O. Water at SMIORE Plant Premises
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 15.04.2022
7. Analysis Starting Date : 16.04.2022
8. Analysis completion Date : 21.04.2022
9. Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.36	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.36	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	76	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	282	500	2000
7	Total Hardness as CaCO ₃	IS : 3025(part-21)	mg/l	90.6	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	28.7	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	2.53	30	100
10	Sulphate as SO ₄	IS : 3025(part-24)	mg/l	14.4	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	36.9	250	1000
12	Nitrate as NO ₃	IS : 3025(part-34)	mg/l	0.54	45	No Relaxation
13	Iron as Fe	IS: 3025(part-34)	mg/l	BDL(0.004)	0.3	No Relaxation
14	Fluoride as F	IS : 3025(part-60)	mg/l	0.12	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	6.6	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	4.8	---	---

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

Verified by



---End of The Report---

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MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1709

Report Issued Date: 21.04.2022

- 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 : R.O. Water at SMIORE Plant Premises
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 15.04.2022
- Analysis Starting Date : 16.04.2022
- Analysis completion Date : 21.04.2022
- Sample Tested as Received

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

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

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:-End of The Report:-



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2022/1709

Report Issued Date: 21.04.2022

- | | |
|---------------------------------|--|
| 1. Name of the Industry | : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka. |
| 2. Sample Type | : R.O. Water at SMIORE Plant Premises |
| 3. Sample Collected By | : MSV Analytical Laboratories, Bellary. |
| 4. Sample Quantity | : 250 ml (Sterilized Bottle) |
| 5. Sample description/condition | : Good/satisfactory |
| 6. Date of sample Receipt | : 15.04.2022 |
| 7. Analysis Starting Date | : 16.04.2022 |
| 8. Analysis Completion Date | : 21.04.2022 |
| 9. Sample tested as Received | |

RESULTS

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

INFERENCE	IS - 10500 Standards Report Status: - The above parameters are within limits.
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MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1715

Report Issued Date: 21.04.2022

- 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 : Bore Well Water at Rajapura Village
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 15.04.2022
- Analysis Starting Date : 16.04.2022
- Analysis completion Date : 21.04.2022
- Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.64	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.50	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	178	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	928	500	2000
7	Total Hardness as CaCO ₃	IS : 3025(part-21)	mg/l	326.4	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	70.8	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	36.3	30	100
10	Sulphate as SO ₄	IS : 3025(part-24)	mg/l	50.8	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	184.7	250	1000
12	Nitrate as NO ₃	IS : 3025(part-34)	mg/l	2.12	45	No Relaxation
13	Iron as Fe	IS: 3025(part-34)	mg/l	BDL(0.004)	0.3	No Relaxation
14	Fluoride as F	IS : 3025(part-60)	mg/l	0.42	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	20.2	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	9.2	---	---

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

Verified by



--- End of The Report ---

Authorized Signature

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

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

E-mail : msvbellary2016@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1715

Report Issued Date: 21.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample location : Bore Well Water at Rajapura Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/satisfactory
6. Date of sample Collection : 15.04.2022
7. Analysis Starting Date : 16.04.2022
8. Analysis completion Date : 21.04.2022
9. Sample Tested as Received

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

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

Verified by



--:End of The Report :-

Authorized Signature

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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2022/1715

Report Issued Date: 21.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Bore Well Water at Rajapura Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Sample Quantity : 250 ml (Sterilized Bottle)
5. Sample description/condition : Good/satisfactory
6. Date of sample Receipt : 15.04.2022
7. Analysis Starting Date : 16.04.2022
8. Analysis Completion Date : 21.04.2022
9. Sample tested as Received

RESULTS

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

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

Verified by



End of the Report

Authorized Signature

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

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Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No :** Mob : 94498 03895, (O) : 08392-255169,
E-mail : msvbellary2018@gmail.com, labmsv@gmail.com **Website :** www.msvbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: TC720722000008755

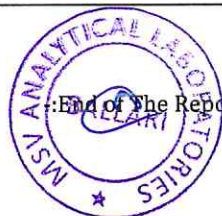
Report Issued Date: 21.04.2022

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location** : Bore Well Water at Hanumanahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary
- Sample Quantity** : 2 Liters
- Sample Description/condition** : Good/satisfactory
- Date of sample Collection** : 15.04.2022
- Analysis Starting Date** : 16.04.2022
- Analysis completion Date** : 21.04.2022
- Sample Tested as Received**

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.86	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.42	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	152	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	78.4	500	2000
7	Total Hardness as CaCO ₃	IS : 3025(part-21)	mg/l	310.4	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	60.8	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	38.4	30	100
10	Sulphate as SO ₄	IS : 3025(part-24)	mg/l	56.6	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	164.6	250	1000
12	Nitrate as NO ₃	IS : 3025(part-34)	mg/l	2.42	45	No Relaxation
13	Iron as Fe	IS: 3025(part-34)	mg/l	BDL(0.004)	0.3	No Relaxation
14	Fluoride as F	IS : 3025(part-60)	mg/l	0.46	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	12.2	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	7.6	---	---

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

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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1710

Report Issued Date: 21.04.2022

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location** : Bore Well Water at Hanumanhalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary
- Sample Quantity** : 2 Liters
- Sample Description/condition** : Good/satisfactory
- Date of sample Collection** : 15.04.2022
- Analysis Starting Date** : 16.04.2022
- Analysis completion Date** : 21.04.2022
- Sample Tested as Received**

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

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

Verified by



End of The Report:-

Authorized Signature

- Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2022/1710

Report Issued Date: 21.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Bore Well Water at Hanumanahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Sample Quantity : 250 ml (Sterilized Bottle)
5. Sample description/condition : Good/satisfactory
6. Date of sample Receipt : 15.04.2022
7. Analysis Starting Date : 16.04.2022
8. Analysis Completion Date : 21.04.2022
9. Sample tested as Received

RESULTS

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

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

Verified by

End of the Report



Authorized Signature

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

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1712

Report Issued Date: 21.04.2022

- 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 : Bore Well Water at Munirabad Village
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 15.04.2022
- Analysis Starting Date : 16.04.2022
- Analysis completion Date : 21.04.2022
- Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.92	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.46	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	161	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	775	500	2000
7	Total Hardness as CaCO ₃	IS : 3025(part-21)	mg/l	317.2	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	63.7	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	38.3	30	100
10	Sulphate as SO ₄	IS : 3025(part-24)	mg/l	60.1	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	168.7	250	1000
12	Nitrate as NO ₃	IS : 3025(part-34)	mg/l	2.56	45	No Relaxation
13	Iron as Fe	IS: 3025(part-34)	mg/l	BDL(0.004)	0.3	No Relaxation
14	Fluoride as F	IS : 3025(part-60)	mg/l	0.49	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	15.2	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	8.5	---	---

INFERENCE	IS 10500 - 2012 Standards BDL - Below Detectable Limit Report Status: - The analyzed values for above measured parameters are within the Permissible limits.
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E-mail : msvallbellary2018@gmail.com, labmsv@gmail.com Website : www.msvallbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1712

Report Issued Date: 21.04.2022

- 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** : Bore Well Water at Munirabad Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary
- Sample Quantity** : 2 Liters
- Sample Description/condition** : Good/satisfactory
- Date of sample Collection** : 15.04.2022
- Analysis Starting Date** : 16.04.2022
- Analysis completion Date** : 21.04.2022
- Sample Tested as Received**

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

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

Authorized Signature

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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2022/1712

Report Issued Date: 21.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Bore Well Water at Munirabad Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Sample Quantity : 250 ml (Sterilized Bottle)
5. Sample description/condition : Good/satisfactory
6. Date of sample Receipt : 15.04.2022
7. Analysis Starting Date : 16.04.2022
8. Analysis Completion Date : 21.04.2022
9. Sample tested as Received

RESULTS

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

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

Verified by

End of the Report



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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1711

Report Issued Date: 21.04.2022

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location : Bore Well Water at Vysanakere Village
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 15.04.2022
- Analysis Starting Date : 16.04.2022
- Analysis completion Date : 21.04.2022
- Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.64	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.50	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	147	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	924	500	2000
7	Total Hardness as CaCO ₃	IS : 3025(part-21)	mg/l	324.2	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	170.5	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	37.3	30	100
10	Sulphate as SO ₄	IS : 3025(part-24)	mg/l	48.2	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	147	250	1000
12	Nitrate as NO ₃	IS : 3025(part-34)	mg/l	2.20	45	No Relaxation
13	Iron as Fe	IS: 3025(part-34)	mg/l	BDL(0.004)	0.3	No Relaxation
14	Fluoride as F	IS : 3025(part-60)	mg/l	0.35	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	20.4	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	10.2	---	---

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

Verified by

End of The Report



Authorized Signature

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

E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1711

Report Issued Date: 21.04.2022

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location : Bore Well Water at Vysanakere Village
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 15.04.2022
- Analysis Starting Date : 16.04.2022
- Analysis completion Date : 21.04.2022
- Sample Tested as Received

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

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

Verified by



Authorized Signature

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

E-mail : msvbellary2016@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2022/1711

Report Issued Date: 21.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Bore Well Water at Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Sample Quantity : 250 ml (Sterilized Bottle)
5. Sample description/condition : Good/satisfactory
6. Date of sample Receipt : 15.04.2022
7. Analysis Starting Date : 16.04.2022
8. Analysis Completion Date : 21.04.2022
9. Sample tested as Received

RESULTS

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

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

Verified by



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

Authorized Signature

- 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/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2021/01714

Report Issued Date: 21.04.2022

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location : Bore Well Water at Venkatagiri Village
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 15.04.2022
- Analysis Starting Date : 16.04.2022
- Analysis completion Date : 21.04.2022
- Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.86	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.40	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	152	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	784	500	2000
7	Total Hardness as CaCO ₃	IS : 3025(part-21)	mg/l	310.4	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	60.8	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	38.4	30	100
10	Sulphate as SO ₄	IS : 3025(part-24)	mg/l	56.6	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	164.6	250	1000
12	Nitrate as NO ₃	IS : 3025(part-34)	mg/l	2.42	45	No Relaxation
13	Iron as Fe	IS: 3025(part-34)	mg/l	BDL(0.004)	0.3	No Relaxation
14	Fluoride as F	IS : 3025(part-60)	mg/l	0.46	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	12.0	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	7.2	---	---

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

Verified by



--:End of The Report :-

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MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/01713

Report Issued Date: 21.04.2022

- 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 : Bore Well Water at Venkatagiri Village
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 15.04.2022
- Analysis Starting Date : 16.04.2022
- Analysis completion Date : 21.04.2022
- Sample Tested as Received

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

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

Verified by



End of The Report

Authorized Signature

- Note :
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E-mail : msvbellary2016@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2021/01713

Report Issued Date: 21.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Bore Well Water at Venkatagiri Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Sample Quantity : 250 ml (Sterilized Bottle)
5. Sample description/condition : Good/satisfactory
6. Date of sample Receipt : 15.04.2022
7. Analysis Starting Date : 16.04.2022
8. Analysis Completion Date : 21.04.2022
9. Sample tested as Received

RESULTS

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

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

Verified by

End of the Report



Authorized Signature

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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/01715

Report Issued Date: 21.04.2022

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location : Bore Well Water at Hosapete
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 15.04.2022
- Analysis Starting Date : 16.04.2022
- Analysis completion Date : 21.04.2022
- Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.84	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.44	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	154	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	786	500	2000
7	Total Hardness as CaCO ₃	IS : 3025(part-21)	mg/l	314	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	155	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	38.6	30	100
10	Sulphate as SO ₄	IS : 3025(part-24)	mg/l	57.2	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	165.2	250	1000
12	Nitrate as NO ₃	IS : 3025(part-34)	mg/l	2.58	45	No Relaxation
13	Iron as Fe	IS: 3025(part-34)	mg/l	BDL(0.004)	0.3	No Relaxation
14	Fluoride as F	IS : 3025(part-60)	mg/l	0.48	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	15.2	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	8.8	---	---

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

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E-mail : msvballary2018@gmail.com, labmsv@gmail.com Website : www.msvballary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2021/01715

Report Issued Date: 21.04.2022

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location** : Bore Well Water at Hosapete
- Sample Collected By** : MSV Analytical Laboratories, Bellary
- Sample Quantity** : 2 Liters
- Sample Description/condition** : Good/satisfactory
- Date of sample Collection** : 15.04.2022
- Analysis Starting Date** : 16.04.2022
- Analysis completion Date** : 21.04.2022
- Sample Tested as Received**

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

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

Verified by



---End of The Report---

Authorized Signature

- Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2021/01715

Report Issued Date: 21.04.2022

1. **Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. **Sample Type** : Bore Well Water at Hosapete
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Sample Quantity** : 250 ml (Sterilized Bottle)
5. **Sample description/condition** : Good/satisfactory
6. **Date of sample Receipt** : 15.04.2022
7. **Analysis Starting Date** : 16.04.2022
8. **Analysis Completion Date** : 21.04.2022
9. **Sample tested as Received**

RESULTS

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

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

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



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- Note: 1. The results listed only to the tested samples & applicable parameters,
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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 08392-255169,

E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1819

Report Issued Date: 21.04.2022

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the sample location : Bore Well Water at Ramgad Reservoir
- Sample Collected By : MSV Analytical Laboratories, Bellary
- Sample Quantity : 2 Liters
- Sample Description/condition : Good/satisfactory
- Date of sample Collection : 15.04.2022
- Analysis Starting Date : 16.04.2022
- Analysis completion Date : 21.04.2022
- Sample Tested as Received

S.No	Parameters	Protocol	Unit	Result	IS 10500-2012	
					Acceptable limit	Permissible limit
Physical parameters						
1	Color	IS : 3025(part-4)	---	Colorless	5	15
2	Odor	IS : 3025(part-5)	---	Agreeable	Agreeable	Agreeable
3	pH	IS : 3025(part-11)	---	7.82	6.5-8.5	No Relaxation
4	Turbidity	IS: 3025(part-10)	NTU	0.40	1	5
Chemical parameters						
5	Alkalinity	IS : 3025(part-23)	mg/l	148	200	600
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	948	500	2000
7	Total Hardness as CaCO ₃	IS : 3025(part-21)	mg/l	312.5	200	600
8	Calcium as Ca	IS : 3025(part-40)	mg/l	64.4	75	200
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	36.81	30	100
10	Sulphate as SO ₄	IS : 3025(part-24)	mg/l	52.2	200	400
11	Chloride as Cl	IS : 3025(part-32)	mg/l	136.9	250	1000
12	Nitrate as NO ₃	IS : 3025(part-34)	mg/l	2.04	45	No Relaxation
13	Iron as Fe	IS: 3025(part-34)	mg/l	BDL(0.004)	0.3	No Relaxation
14	Fluoride as F	IS : 3025(part-60)	mg/l	0.44	1.0	1.5
15	Sodium as Na	IS 3025(part 45):1993	mg/l	13.3	---	---
16	Potassium as K	Is 3025(part 45):1993	mg/l	6.8	---	---

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

Verified by



End of The Report :-

Authorized Signature

- Note : 1. The results listed only to the tested samples & applicable parameters,
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MSVAL/W/F/13/03

ANALYSIS REPORT OF WATER QUALITY

Test Report No: MSVAL/2022/1819

Report Issued Date: 21.04.2022

- 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** : Bore Well Water at Ramgad Reservoir
- Sample Collected By** : MSV Analytical Laboratories, Bellary
- Sample Quantity** : 2 Liters
- Sample Description/condition** : Good/satisfactory
- Date of sample Collection** : 15.04.2022
- Analysis Starting Date** : 16.04.2022
- Analysis completion Date** : 21.04.2022
- Sample Tested as Received**

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

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

Verified by



:-End of The Report :-

Authorized Signature

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

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

MSVAL/A/F/18/03

ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2022/1819

Report Issued Date: 21.04.2022

1. **Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. **Sample Type** : Bore Well Water at Ramgad Reservoir
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Sample Quantity** : 250 ml (Sterilized Bottle)
5. **Sample description/condition** : Good/satisfactory
6. **Date of sample Receipt** : 15.04.2022
7. **Analysis Starting Date** : 16.04.2022
8. **Analysis Completion Date** : 21.04.2022
9. **Sample tested as Received**

RESULTS

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

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



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

Authorized Signature

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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No : TC720722000009786F

Report Issued Date : 30.04.2022

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID : Coke Screening & Store
- Sample Collected By : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected : Sample collected with VSS - 1
- Date of Sample Receipt : 25.04.2022
- Analysis Starting Date : 26.04.2022
- Analysis Completion Date : 30.04.2022
- Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	25.04.2022
Fuel Used	---
Stack Temperature (°C)	35
Velocity (m/s)	6.3
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/Nm ³	25.2	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm ³	16.3	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm ³	12.4	500
Carbon Monoxide as(CO)	IS 13270	%	0.25	Max 1%

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

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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No : TC72072200009787F

Report Issued Date : 30.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Cutter
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 25.04.2022
6. Analysis Starting Date : 26.04.2022
7. Analysis Completion Date : 30.04.2022
8. Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	25.04.2022
Fuel Used	---
Stack Temperature (°C)	40
Velocity (m/s)	6.2
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/Nm ³	22.1	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm ³	11.3	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm ³	9.4	500
Carbon Monoxide as(CO)	IS 13270	%	0.20	Max 1%

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

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:- END OF REPORT:-

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

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No : TC72072200009788F

Report Issued Date : 30.04.2022

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID : Coal Crushing Area
- Sample Collected By : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected : Sample collected with VSS - 1
- Date of Sample Receipt : 25.04.2022
- Analysis Starting Date : 26.04.2022
- Analysis Completion Date : 30.04.2022
- Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	25.04.2022
Fuel Used	---
Stack Temperature (°C)	82
Velocity (m/s)	7.4
Height (m)	15mtrs AGL
Diameter (m)	0.75
Cross sectional area (m ²)	0.44156

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	26.3	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm ³	14.1	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm ³	11.3	500
Carbon Monoxide as(CO)	IS 13270	%	0.22	Max 1%

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

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:- END OF REPORT :-



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: TC720722000009789F

Report Issued Date : 30.04.2022

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID** : DG Set 750 KVA
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected** : Sample collected with VSS - 1
- Date of Sample Receipt** : 25.04.2022
- Analysis Starting Date** : 26.04.2022
- Analysis Completion Date** : 30.04.2022
- Sample Tested as Received**

GENERAL DETAILS

Date of Monitoring	25.04.2022
Fuel Used	Diesel
Stack Temperature (°C)	98
Velocity (m/s)	7.2
Height (m)	15mtrs AGL
Diameter (m)	0.3
Cross sectional area (m ²)	0.07065

RESULTS

Parameters	Protocol	Unit	Result	KSPCB Consent Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	30.1	100
Sulphur dioxide	IS-11255(Part2) - 1985	PPM	25.2	50
Nitrogen dioxide	IS-11255(Part7) - 2005	PPM	16.3	50

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

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Authorized Signature



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No : TC72072200009790F

Report Issued Date : 30.04.2022

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID** : Coke Oven Battery - Passes Through WHRB-1
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected** : Sample collected with VSS - 1
- Date of Sample Receipt** : 25.04.2022
- Analysis Starting Date** : 26.04.2022
- Analysis Completion Date** : 30.04.2022
- Sample Tested as Received**

GENERAL DETAILS

Date of Monitoring	25.04.2022
Fuel Used	----
Stack Temperature (°C)	128
Velocity (m/s)	7.0
Height (m)	60 mtrs AGL
Diameter (m)	3.4
Cross sectional area (m ²)	9.0746

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	34.1	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm ³	28.6	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm ³	60.1	500
Carbon Monoxide as(CO)	IS 13270	%	0.19	Max 1%

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

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Authorized Signature



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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No : TC720722000009791F

Report Issued Date : 30.04.2022

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Ferro Alloy Arc Furnace
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 25.04.2022
6. Analysis Starting Date : 26.04.2022
7. Analysis Completion Date : 30.04.2022
8. Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	25.04.2022
Fuel Used	----
Stack Temperature (°C)	95
Velocity (m/s)	9.2
Height (m)	35 mtrs AGL
Diameter (m)	2.5
Cross sectional area (m ²)	4.90625

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	36.5	150

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

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- END OF REPORT -

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MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No : TC72072200009792F

Report Issued Date : 30.04.2022

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID : Coke Oven Battery - Passes Through WHRB-2
- Sample Collected By : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected : Sample collected with VSS - 1
- Date of Sample Receipt : 25.04.2022
- Analysis Starting Date : 26.04.2022
- Analysis Completion Date : 30.04.2022
- Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	25.04.2022
Fuel Used	----
Stack Temperature (°C)	141
Velocity (m/s)	7.2
Height (m)	60 mtrs AGL
Diameter (m)	3.4
Cross sectional area (m ²)	9.0746

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	32.4	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm ³	34.2	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm ³	58.7	500
Carbon Monoxide as(CO)	IS 13270	%	0.23	Max 1%

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

Authorized Signature



END OF REPORT:-

- The results listed only to the tested samples & applicable parameters,
- Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
- 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.
- Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.
- Sampling is not done by us unless otherwise specified.
- The tests and/or calibrations marked with an are not accredited by NABL.