



# MSV Analytical Laboratories

(Certified by ISO 14001-2015, OHSAS18001-2007, ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 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/2023/3264

Issue Date: 06.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 02.03.2023
6. Date of Sample Receipt : 03.03.2023
7. Sample Code : 3565
8. Analysis Starting Date : 03.03.2023
9. Analysis Completion Date : 06.03.2023
10. Sample Tested as Received

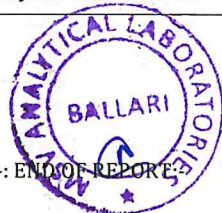
S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	55.4	54.3	52.6	µg / m <sup>3</sup>	54.10	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	26.8	25.1	22.4	µg / m <sup>3</sup>	24.77	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	12.14	10.25	11.05	µg / m <sup>3</sup>	11.15	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.45	15.85	13.95	µg / m <sup>3</sup>	16.08	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	14.5	12.6	11.3	µg / m <sup>3</sup>	12.80	100
6	Lead	IS-5182(Part22)	0.036	0.032	0.024	µg / m <sup>3</sup>	0.031	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.40	0.36	0.32	mg / m <sup>3</sup>	0.36	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.26	1.36	1.22	µg / m <sup>3</sup>	1.28	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



END OF REPORT

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,  
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/2023/3264

Issue Date: 06.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 02.03.2023
6. Date of Sample Receipt : 03.03.2023
7. Sample Code : 3565
8. Analysis Starting Date : 03.03.2023
9. Analysis Completion Date : 06.03.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

END OF REPORT:-

Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3265

Issue Date: 06.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 02.03.2023
6. Date of Sample Receipt : 03.03.2023
7. Sample Code : 3566
8. Analysis Starting Date : 03.03.2023
9. Analysis Completion Date : 06.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	53.2	52.5	51.4	µg / m <sup>3</sup>	52.37	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	16.7	16.4	15.2	µg / m <sup>3</sup>	16.10	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.4	8.2	5.8	µg / m <sup>3</sup>	7.80	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	13.62	12.4	10.06	µg / m <sup>3</sup>	12.03	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	6.7	7.4	6.5	µg / m <sup>3</sup>	6.87	100
6	Lead	IS-5182(Part22)	0.032	0.027	0.025	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.26	0.30	0.24	mg / m <sup>3</sup>	0.27	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.30	1.36	1.32	µg / m <sup>3</sup>	1.33	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



:- END OF REPORT :-

Authorized Signatory

B. Chinnna Lingana Gouda  
Chief executive of the laboratory

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MSVAL/A/F/16/03

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Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 02.03.2023
6. Date of Sample Receipt : 03.03.2023
7. Sample Code : 3566
8. Analysis Starting Date : 03.03.2023
9. Analysis Completion Date : 06.03.2023
10. Sample Tested as Received

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

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



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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3266

Issue Date: 06.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 02.03.2023
6. Date of Sample Receipt : 03.03.2023
7. Sample Code : 3567
8. Analysis Starting Date : 03.03.2023
9. Analysis Completion Date : 06.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	53.2	51.6	52.8	µg / m <sup>3</sup>	52.53	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	17.5	16.4	15.7	µg / m <sup>3</sup>	16.53	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	10.4	11.6	8.24	µg / m <sup>3</sup>	10.08	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.7	14.2	12.7	µg / m <sup>3</sup>	14.53	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.4	9.2	6.4	µg / m <sup>3</sup>	8.00	100
6	Lead	IS-5182(Part22)	0.023	0.018	0.016	µg / m <sup>3</sup>	0.019	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.25	0.23	0.18	mg / m <sup>3</sup>	0.22	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.33	1.25	1.22	µg / m <sup>3</sup>	1.27	20

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



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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3266

Issue Date: 06.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysnakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 02.03.2023
6. Date of Sample Receipt : 03.03.2023
7. Sample Code : 3567
8. Analysis Starting Date : 03.03.2023
9. Analysis Completion Date : 06.03.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3267

Issue Date: 06.03.2023

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(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 02.03.2023
6. Date of Sample Receipt : 03.03.2023
7. Sample Code : 3568
8. Analysis Starting Date : 03.03.2023
9. Analysis Completion Date : 06.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.2	53.6	52.3	µg / m <sup>3</sup>	53.37	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	14.4	14.7	12.3	µg / m <sup>3</sup>	13.80	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.05	9.2	8.24	µg / m <sup>3</sup>	8.50	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	11.4	10.8	11.34	µg / m <sup>3</sup>	11.18	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.6	9.4	8.3	µg / m <sup>3</sup>	9.10	100
6	Lead	IS-5182(Part22)	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.26	0.36	0.24	mg / m <sup>3</sup>	0.29	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

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

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Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 02.03.2023
6. Date of Sample Receipt : 03.03.2023
7. Sample Code : 3568
8. Analysis Starting Date : 03.03.2023
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10. Sample Tested as Received

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

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



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

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





# MSV Analytical Laboratories

(Certified by ISO 14001-2015, OHSAS18001-2007, ISO 9001-2015)

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

2

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3674

Issue Date: 10.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 07.03.2023
6. Date of Sample Receipt : 08.03.2023
7. Sample Code : 4062
8. Analysis Starting Date : 08.03.2023
9. Analysis Completion Date : 10.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	59.3	53.2	57.6	µg / m <sup>3</sup>	56.70	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	17.5	14.5	16.3	µg / m <sup>3</sup>	16.10	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.75	9.6	6.32	µg / m <sup>3</sup>	8.22	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.6	14.9	16.7	µg / m <sup>3</sup>	16.73	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.6	9.7	6.9	µg / m <sup>3</sup>	8.40	100
6	Lead	IS-5182(Part22)	0.026	0.024	0.020	µg / m <sup>3</sup>	0.023	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.33	0.32	0.30	mg / m <sup>3</sup>	0.32	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.12	1.15	1.14	µg / m <sup>3</sup>	1.14	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3674

Issue Date: 10.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 07.03.2023
6. Date of Sample Receipt : 08.03.2023
7. Sample Code : 4062
8. Analysis Starting Date : 08.03.2023
9. Analysis Completion Date : 10.03.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,  
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**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/2023/3675

Issue Date: 10.03.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 07.03.2023
- Date of Sample Receipt** : 08.03.2023
- Sample Code** : 4063
- Analysis Starting Date** : 08.03.2023
- Analysis Completion Date** : 10.03.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.24	57.8	53.4	µg / m <sup>3</sup>	55.15	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	16.3	17.2	15.7	µg / m <sup>3</sup>	16.40	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.3	7.4	9.7	µg / m <sup>3</sup>	8.47	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	11.7	14.6	12.4	µg / m <sup>3</sup>	12.90	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	12.6	8.4	9.3	µg / m <sup>3</sup>	10.10	100
6	Lead	IS-5182(Part22)	0.024	0.020	0.017	µg / m <sup>3</sup>	0.020	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.30	0.34	0.28	mg / m <sup>3</sup>	0.31	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.22	1.17	1.16	µg / m <sup>3</sup>	1.18	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B. Chinnna Lingana Gouda  
Chief executive of the laboratory

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

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**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/2023/3675

Issue Date: 10.03.2023

1. **Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. **Name of the location** : Kallahalli Village
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
5. **Date of Sampling** : 07.03.2023
6. **Date of Sample Receipt** : 08.03.2023
7. **Sample Code** : 4063
8. **Analysis Starting Date** : 08.03.2023
9. **Analysis Completion Date** : 10.03.2023
10. **Sample Tested as Received**

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

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



Authorized Signatory

B.Chinnra Lingana Gouda  
Chief executive of the laboratory

END OF REPORT

Note : 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 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.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/36746

Issue Date: 10.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 07.03.2023
6. Date of Sample Receipt : 08.03.2023
7. Sample Code : 4064
8. Analysis Starting Date : 08.03.2023
9. Analysis Completion Date : 10.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	50.3	53.5	52.4	µg / m <sup>3</sup>	52.07	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	11.4	15.5	13.1	µg / m <sup>3</sup>	13.33	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.3	7.5	6.7	µg / m <sup>3</sup>	7.50	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	11.7	12.2	10.2	µg / m <sup>3</sup>	11.37	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	0.23	0.25	0.20	µg / m <sup>3</sup>	0.23	100
6	Lead	IS-5182(Part22)	0.028	0.022	0.024	µg / m <sup>3</sup>	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.16	0.15	0.12	mg / m <sup>3</sup>	0.14	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.24	1.22	µg / m <sup>3</sup>	1.22	20

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



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

Note: 1. The results listed only to the tested samples & applicable parameters,  
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E-mail : msv.lab01@gmail.com, labmsv@gmail.com, Website : www.msvallbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3676

Issue Date: 10.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 07.03.2023
6. Date of Sample Receipt : 08.03.2023
7. Sample Code : 4064
8. Analysis Starting Date : 08.03.2023
9. Analysis Completion Date : 10.03.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,  
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**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvallbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3677

Issue Date: 10.03.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 07.03.2023
- Date of Sample Receipt** : 08.03.2023
- Sample Code** : 4065
- Analysis Starting Date** : 08.03.2023
- Analysis Completion Date** : 10.03.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.3	56.6	50.4	µg / m <sup>3</sup>	53.77	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	17.6	14.7	11.6	µg / m <sup>3</sup>	14.63	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.7	7.9	6.3	µg / m <sup>3</sup>	7.63	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	11.7	13.2	12.3	µg / m <sup>3</sup>	12.40	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	5.6	6.8	4.9	µg / m <sup>3</sup>	5.77	100
6	Lead	IS-5182(Part22)	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.26	0.24	0.22	mg / m <sup>3</sup>	0.24	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



:- END OF REPORT :-

Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 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.msvallbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3677

Issue Date: 10.03.2023

1. **Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. **Name of the location** : Gunda Village
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
5. **Date of Sampling** : 07.03.2023
6. **Date of Sample Receipt** : 08.03.2023
7. **Sample Code** : 4065
8. **Analysis Starting Date** : 08.03.2023
9. **Analysis Completion Date** : 10.03.2023
10. **Sample Tested as Received**

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

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



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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





# MSV Analytical Laboratories

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C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No** : Mob : 94498 03895, (O) : 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/2023/3955

Issue Date: 14.03.2023

1. **Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. **Name of the location** : Smiore Colony
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
5. **Date of Sampling** : 10.03.2023
6. **Date of Sample Receipt** : 11.03.2023
7. **Sample Code** : 4385
8. **Analysis Starting Date** : 11.03.2023
9. **Analysis Completion Date** : 14.03.2023
10. **Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	52.8	53.4	51.6	µg / m <sup>3</sup>	52.6	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	22.4	22.8	20.6	µg / m <sup>3</sup>	21.9	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.6	11.8	9.4	µg / m <sup>3</sup>	10.3	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.4	20.4	18.2	µg / m <sup>3</sup>	19.0	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.2	10.8	9.8	µg / m <sup>3</sup>	9.9	100
6	Lead	IS-5182(Part22)	0.032	0.030	0.034	µg / m <sup>3</sup>	0.032	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.42	0.44	0.48	mg / m <sup>3</sup>	0.45	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.12	2.1	2.2	µg / m <sup>3</sup>	1.81	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3955

Issue Date: 14.03.2023

1. **Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. **Name of the location** : Smiore Colony
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
5. **Date of Sampling** : 10.03.2023
6. **Date of Sample Receipt** : 11.03.2023
7. **Sample Code** : 4385
8. **Analysis Starting Date** : 11.03.2023
9. **Analysis Completion Date** : 14.03.2023
10. **Sample Tested as Received**

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

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,  
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**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/2023/3956

Issue Date: 14.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 10.03.2023
6. Date of Sample Receipt : 11.03.2023
7. Sample Code : 4386
8. Analysis Starting Date : 11.03.2023
9. Analysis Completion Date : 14.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	58.4	59.8	56.6	µg / m <sup>3</sup>	58.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.2	22.8	19.6	µg / m <sup>3</sup>	20.9	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.6	10.4	8.8	µg / m <sup>3</sup>	9.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	13.4	14.8	13.2	µg / m <sup>3</sup>	13.8	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.6	9.4	7.8	µg / m <sup>3</sup>	8.6	100
6	Lead	IS-5182(Part22)	0.038	0.036	0.034	µg / m <sup>3</sup>	0.036	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.32	0.36	0.34	mg / m <sup>3</sup>	0.34	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.12	1.28	2.1	µg / m <sup>3</sup>	1.50	20

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



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

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**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/2023/3956

Issue Date: 14.03.2023

- 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 Sampling** : 10.03.2023
- Date of Sample Receipt** : 11.03.2023
- Sample Code** : 4386
- Analysis Starting Date** : 11.03.2023
- Analysis Completion Date** : 14.03.2023
- Sample Tested as Received**

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

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

Analysed by



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

Note : 1. The results listed only to the tested samples & applicable parameters,  
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Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No** : Mob : 94498 03895, (O) : 08392-255169,  
**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3957

Issue Date: 14.03.2023

1. **Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. **Name of the location** : Vysanakere Village
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
5. **Date of Sampling** : 10.03.2023
6. **Date of Sample Receipt** : 11.03.2023
7. **Sample Code** : 4387
8. **Analysis Starting Date** : 11.03.2023
9. **Analysis Completion Date** : 14.03.2023
10. **Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	52.8	54.4	51.2	µg / m <sup>3</sup>	52.8	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	16.8	17.6	16.4	µg / m <sup>3</sup>	16.9	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.4	8.8	7.6	µg / m <sup>3</sup>	7.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	12.2	13.8	11.8	µg / m <sup>3</sup>	12.6	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	6.8	7.8	6.2	µg / m <sup>3</sup>	6.9	100
6	Lead	IS-5182(Part22)	0.092	0.090	0.086	µg / m <sup>3</sup>	0.089	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.28	0.26	mg / m <sup>3</sup>	0.26	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.24	1.26	µg / m <sup>3</sup>	1.26	20

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

Analysed by



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

Note : 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3957

Issue Date: 14.03.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 10.03.2023
- Date of Sample Receipt** : 11.03.2023
- Sample Code** : 4387
- Analysis Starting Date** : 11.03.2023
- Analysis Completion Date** : 14.03.2023
- Sample Tested as Received**

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

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

Analysed by



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

:- END OF REPORT :-

Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
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**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/2023/3958

Issue Date: 14.03.2023

1. **Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. **Name of the location** : Gunda Village
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
5. **Date of Sampling** : 10.03.2023
6. **Date of Sample Receipt** : 11.03.2023
7. **Sample Code** : 4388
8. **Analysis Starting Date** : 11.03.2023
9. **Analysis Completion Date** : 14.03.2023
10. **Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	60.4	57.8	56.2	µg / m <sup>3</sup>	58.1	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	18.2	18.4	17.6	µg / m <sup>3</sup>	18.1	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.8	7.8	7.2	µg / m <sup>3</sup>	7.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	11.4	10.6	10.8	µg / m <sup>3</sup>	10.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.4	8.8	8.2	µg / m <sup>3</sup>	8.8	100
6	Lead	IS-5182(Part22)	0.028	0.024	0.022	µg / m <sup>3</sup>	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.22	0.24	0.26	mg / m <sup>3</sup>	0.24	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.26	1.24	1.28	µg / m <sup>3</sup>	1.26	20

INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,  
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4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.  
5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



# MSV Analytical Laboratories

(Certified by ISO 14001-2015, OHSAS18001-2007, ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No** : Mob : 94498 03895, (O) : 08392-255169,  
**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/3958

Issue Date: 14.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 10.03.2023
6. Date of Sample Receipt : 11.03.2023
7. Sample Code : 4388
8. Analysis Starting Date : 11.03.2023
9. Analysis Completion Date : 14.03.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4118

Issue Date: 16.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 13.03.2023
6. Date of Sample Receipt : 14.03.2023
7. Sample Code : 4574
8. Analysis Starting Date : 14.03.2023
9. Analysis Completion Date : 16.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	60.4	60.8	58.6	µg / m <sup>3</sup>	59.9	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	23.8	25.4	23.2	µg / m <sup>3</sup>	24.1	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.8	10.8	8.2	µg / m <sup>3</sup>	9.3	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.2	20.4	17.8	µg / m <sup>3</sup>	18.8	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.2	8.4	8.6	µg / m <sup>3</sup>	8.7	100
6	Lead	IS-5182(Part22)	0.028	0.026	0.030	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.40	0.42	0.38	mg / m <sup>3</sup>	0.40	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.6	1.8	2.2	µg / m <sup>3</sup>	1.9	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4118

Issue Date: 16.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 13.03.2023
6. Date of Sample Receipt : 14.03.2023
7. Sample Code : 4574
8. Analysis Starting Date : 14.03.2023
9. Analysis Completion Date : 16.03.2023
10. Sample Tested as Received

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

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



:- END OF REPORT:-

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4119

Issue Date: 16.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 13.03.2023
6. Date of Sample Receipt : 14.03.2023
7. Sample Code : 4575
8. Analysis Starting Date : 14.03.2023
9. Analysis Completion Date : 16.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	56.8	57.6	54.4	µg / m <sup>3</sup>	56.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.4	22.4	20.6	µg / m <sup>3</sup>	21.1	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.6	10.2	8.4	µg / m <sup>3</sup>	9.1	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	12.6	14.2	12.4	µg / m <sup>3</sup>	13.1	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.2	7.8	7.4	µg / m <sup>3</sup>	7.8	100
6	Lead	IS-5182(Part22)	0.030	0.034	0.038	µg / m <sup>3</sup>	0.034	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.30	0.28	0.34	mg / m <sup>3</sup>	0.31	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.82	1.84	1.88	µg / m <sup>3</sup>	1.85	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4119

Issue Date: 16.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 13.03.2023
6. Date of Sample Receipt : 14.03.2023
7. Sample Code : 4575
8. Analysis Starting Date : 14.03.2023
9. Analysis Completion Date : 16.03.2023
10. Sample Tested as Received

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

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

Analysed by



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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4120

Issue Date: 16.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 13.03.2023
6. Date of Sample Receipt : 14.03.2023
7. Sample Code : 4576
8. Analysis Starting Date : 14.03.2023
9. Analysis Completion Date : 16.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	52.4	52.8	50.4	µg / m <sup>3</sup>	51.9	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	17.4	18.8	15.6	µg / m <sup>3</sup>	17.3	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.2	7.6	6.8	µg / m <sup>3</sup>	7.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	12.4	14.2	11.8	µg / m <sup>3</sup>	12.8	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	4.2	3.8	3.6	µg / m <sup>3</sup>	3.9	100
6	Lead	IS-5182(Part22)	0.086	0.088	0.092	µg / m <sup>3</sup>	0.089	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.26	0.28	mg / m <sup>3</sup>	0.26	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.16	1.20	1.18	µg / m <sup>3</sup>	1.18	20

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

Analysed by



:- END OF REPORT:-

Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

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

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4120

Issue Date: 16.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 13.03.2023
6. Date of Sample Receipt : 14.03.2023
7. Sample Code : 4576
8. Analysis Starting Date : 14.03.2023
9. Analysis Completion Date : 16.03.2023
10. Sample Tested as Received

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

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

Analysed by



:- END OF REPORT

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4121

Issue Date: 16.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 13.03.2023
6. Date of Sample Receipt : 14.03.2023
7. Sample Code : 4577
8. Analysis Starting Date : 14.03.2023
9. Analysis Completion Date : 16.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.8	53.6	51.8	µg / m <sup>3</sup>	53.4	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	15.4	14.8	14.2	µg / m <sup>3</sup>	14.8	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	6.8	6.4	4.6	µg / m <sup>3</sup>	5.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	10.2	9.4	8.4	µg / m <sup>3</sup>	9.3	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	7.4	7.2	6.2	µg / m <sup>3</sup>	6.9	100
6	Lead	IS-5182(Part22)	0.016	0.018	0.014	µg / m <sup>3</sup>	0.016	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.28	0.22	mg / m <sup>3</sup>	0.25	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.24	1.28	µg / m <sup>3</sup>	1.24	20

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



:- END OF REPORT:-

Authorized Signatory

B. Chinnna Lingana Gouda  
Chief executive of the laboratory

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



# MSV Analytical Laboratories

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

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

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4121

Issue Date: 16.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 13.03.2023
6. Date of Sample Receipt : 14.03.2023
7. Sample Code : 4577
8. Analysis Starting Date : 14.03.2023
9. Analysis Completion Date : 16.03.2023
10. Sample Tested as Received

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

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



:- END OF REPORT :-

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

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

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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.





# MSV Analytical Laboratories

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C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1<sup>st</sup> & 2<sup>nd</sup> Floor)  
Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No** : Mob : 94498 03895, (O) : 08392-255169,  
**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvalbellary.com

5

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4409

Issue Date: 18.03.2023

1. **Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. **Name of the location** : Smiore Colony
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
5. **Date of Sampling** : 15.03.2023
6. **Date of Sample Receipt** : 16.03.2023
7. **Sample Code** : 4913
8. **Analysis Starting Date** : 16.03.2023
9. **Analysis Completion Date** : 18.03.2023
10. **Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	60.8	60.2	58.6	µg / m <sup>3</sup>	59.9	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	22.4	23.6	22.4	µg / m <sup>3</sup>	22.8	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	17.0	19.2	17.8	µg / m <sup>3</sup>	18.0	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	20.8	21.6	20.2	µg / m <sup>3</sup>	20.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.4	9.6	8.2	µg / m <sup>3</sup>	8.7	100
6	Lead	IS-5182(Part22)	0.036	0.038	0.034	µg / m <sup>3</sup>	0.036	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	<0.01	<0.01	<0.01	mg / m <sup>3</sup>	<0.01	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	1.28	1.34	1.26	µg / m <sup>3</sup>	1.29	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.82	1.84	1.86	µg / m <sup>3</sup>	1.84	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

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

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Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No** : Mob : 94498 03895, (O) : 08392-255169,  
**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4409

Issue Date: 18.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 15.03.2023
6. Date of Sample Receipt : 16.03.2023
7. Sample Code : 4913
8. Analysis Starting Date : 16.03.2023
9. Analysis Completion Date : 18.03.2023
10. Sample Tested as Received

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

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



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

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Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No** : Mob : 94498 03895, (O) : 08392-255169,  
**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4410

Issue Date: 18.03.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, 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 Sampling** : 15.03.2023
- Date of Sample Receipt** : 16.03.2023
- Sample Code** : 4914
- Analysis Starting Date** : 16.03.2023
- Analysis Completion Date** : 18.03.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	55.4	56.8	53.6	µg / m <sup>3</sup>	55.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	18.8	20.4	17.6	µg / m <sup>3</sup>	18.9	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	12.4	13.2	14.8	µg / m <sup>3</sup>	13.5	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.6	17.8	16.2	µg / m <sup>3</sup>	16.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.2	10.4	7.6	µg / m <sup>3</sup>	8.7	100
6	Lead	IS-5182(Part22)	1.20	1.26	1.24	µg / m <sup>3</sup>	1.23	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.34	0.40	0.38	mg / m <sup>3</sup>	0.37	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.40	1.42	1.32	µg / m <sup>3</sup>	1.38	20

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



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

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**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/2023/4410

Issue Date: 18.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 15.03.2023
6. Date of Sample Receipt : 16.03.2023
7. Sample Code : 4914
8. Analysis Starting Date : 16.03.2023
9. Analysis Completion Date : 18.03.2023
10. Sample Tested as Received

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

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

Analysed by



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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4411

Issue Date: 18.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 15.03.2023
6. Date of Sample Receipt : 16.03.2023
7. Sample Code : 4915
8. Analysis Starting Date : 16.03.2023
9. Analysis Completion Date : 18.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	56.8	55.2	53.4	µg / m <sup>3</sup>	55.1	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	18.2	17.4	16.6	µg / m <sup>3</sup>	17.4	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.4	8.8	8.2	µg / m <sup>3</sup>	8.8	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	14.8	13.6	13.2	µg / m <sup>3</sup>	13.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.8	7.4	9.2	µg / m <sup>3</sup>	8.5	100
6	Lead	IS-5182(Part22)	0.028	0.024	0.032	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.24	0.34	mg / m <sup>3</sup>	0.29	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.32	1.36	1.30	µg / m <sup>3</sup>	1.33	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



Authorized Signatory

B. Channa Lingana Gouda  
Chief executive of the laboratory

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

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4411

Issue Date: 18.03.2023

1. **Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. **Name of the location** : Vysanakere Village
3. **Sample Collected By** : MSV Analytical Laboratories, Bellary.
4. **Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
5. **Date of Sampling** : 15.03.2023
6. **Date of Sample Receipt** : 16.03.2023
7. **Sample Code** : 4915
8. **Analysis Starting Date** : 16.03.2023
9. **Analysis Completion Date** : 18.03.2023
10. **Sample Tested as Received**

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

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters,  
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**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/2023/4412

Issue Date: 18.03.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 15.03.2023
- Date of Sample Receipt** : 16.03.2023
- Sample Code** : 4916
- Analysis Starting Date** : 16.03.2023
- Analysis Completion Date** : 18.03.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	55.2	54.8	52.2	µg / m <sup>3</sup>	54.1	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	16.6	16.2	14.8	µg / m <sup>3</sup>	15.9	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.0	8.4	8.2	µg / m <sup>3</sup>	8.5	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.0	16.8	17.4	µg / m <sup>3</sup>	17.4	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	7.8	6.6	6.4	µg / m <sup>3</sup>	6.9	100
6	Lead	IS-5182(Part22)	1.44	1.36	1.32	µg / m <sup>3</sup>	1.37	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.32	0.26	0.34	mg / m <sup>3</sup>	0.31	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.24	1.32	ng / m <sup>3</sup>	1.28	20

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



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

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

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Sanganakallu Road, KEB Circle, Ballari - 583103 **Contact No** : Mob : 94498 03895, (O) : 08392-255169,  
**E-mail** : msv.lab01@gmail.com, labmsv@gmail.com, **Website** : www.msvlabellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4412

Issue Date: 18.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 15.03.2023
6. Date of Sample Receipt : 16.03.2023
7. Sample Code : 4916
8. Analysis Starting Date : 16.03.2023
9. Analysis Completion Date : 18.03.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4631

Issue Date: 22.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 18.03.2023
6. Date of Sample Receipt : 20.03.2023
7. Sample Code : 5116
8. Analysis Starting Date : 20.03.2023
9. Analysis Completion Date : 22.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	53.8	55.2	52.6	µg / m <sup>3</sup>	53.9	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	23.2	24.8	21.8	µg / m <sup>3</sup>	23.3	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	10.4	11.2	8.8	µg / m <sup>3</sup>	10.1	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	17.8	18.6	17.2	µg / m <sup>3</sup>	17.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	10.6	11.4	10.8	µg / m <sup>3</sup>	10.9	100
6	Lead	IS-5182(Part22)	0.026	0.028	0.030	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.37	0.42	0.40	mg / m <sup>3</sup>	0.40	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.32	1.28	1.30	µg / m <sup>3</sup>	1.30	20

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



END OF REPORT

Authorized Signatory

B.Chirina Lingana Gouda  
Chief executive of the laboratory

Page:1

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4631

Issue Date: 22.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 18.03.2023
6. Date of Sample Receipt : 20.03.2023
7. Sample Code : 5116
8. Analysis Starting Date : 20.03.2023
9. Analysis Completion Date : 22.03.2023
10. Sample Tested as Received

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

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

Analysed by



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

Page:2

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4632

Issue Date: 22.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 18.03.2023
6. Date of Sample Receipt : 20.03.2023
7. Sample Code : 5117
8. Analysis Starting Date : 20.03.2023
9. Analysis Completion Date : 22.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	56.4	57.2	54.8	µg / m <sup>3</sup>	56.1	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	18.8	20.4	18.2	µg / m <sup>3</sup>	19.1	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	10.6	10.4	9.2	µg / m <sup>3</sup>	10.1	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	17.6	20.8	19.4	µg / m <sup>3</sup>	19.3	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	10.8	9.6	8.4	µg / m <sup>3</sup>	9.6	100
6	Lead	IS-5182(Part22)	0.026	0.030	0.032	µg / m <sup>3</sup>	0.029	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.26	0.32	0.34	mg / m <sup>3</sup>	0.31	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.24	1.32	µg / m <sup>3</sup>	1.3	20

### INFERENCE

As per NAAQS Standards

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

Analysed by



END OF REPORT

Authorized Signatory

B. Chinnna Lingana Gouda  
Chief executive of the laboratory

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4632

Issue Date: 22.03.2023

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(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 18.03.2023
6. Date of Sample Receipt : 20.03.2023
7. Sample Code : 5117
8. Analysis Starting Date : 20.03.2023
9. Analysis Completion Date : 22.03.2023
10. Sample Tested as Received

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

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



:- END OF REPORT

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

Page:2

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4633

Issue Date: 22.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 18.03.2023
6. Date of Sample Receipt : 20.03.2023
7. Sample Code : 5118
8. Analysis Starting Date : 20.03.2023
9. Analysis Completion Date : 22.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	58.6	57.1	56.2	µg / m <sup>3</sup>	57.3	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	22.6	21.0	20.1	µg / m <sup>3</sup>	21.2	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.04	7.82	7.01	µg / m <sup>3</sup>	8.0	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.76	16.06	15.41	µg / m <sup>3</sup>	16.1	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.8	9.2	7.6	µg / m <sup>3</sup>	8.5	100
6	Lead	IS-5182(Part22)	0.029	0.026	0.024	µg / m <sup>3</sup>	0.026	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.32	0.24	mg / m <sup>3</sup>	0.28	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.27	1.29	1.25	µg / m <sup>3</sup>	1.3	20

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

Analysed by



:- END OF REPORT:-

Authorized Signatory

B. Chinnna Lingana Gouda  
Chief executive of the laboratory

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

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

Page:1

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4633

Issue Date: 22.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 18.03.2023
6. Date of Sample Receipt : 20.03.2023
7. Sample Code : 5118
8. Analysis Starting Date : 20.03.2023
9. Analysis Completion Date : 22.03.2023
10. Sample Tested as Received

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

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

Analysed by



:- END OF REPORT :-

Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

Page:2

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# MSV Analytical Laboratories

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

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

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4634

Issue Date: 22.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 18.03.2023
6. Date of Sample Receipt : 20.03.2023
7. Sample Code : 5119
8. Analysis Starting Date : 20.03.2023
9. Analysis Completion Date : 22.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	59.3	58.7	57.1	µg / m <sup>3</sup>	58.37	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	23.4	22.5	21.2	µg / m <sup>3</sup>	22.37	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.19	8.54	7.15	µg / m <sup>3</sup>	8.29	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.11	14.26	14.20	µg / m <sup>3</sup>	14.86	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.8	8.0	6.8	µg / m <sup>3</sup>	7.87	100
6	Lead	IS-5182(Part22)	0.030	0.028	0.026	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.34	0.30	mg / m <sup>3</sup>	0.31	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.26	1.24	µg / m <sup>3</sup>	1.26	20

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



Authorized Signatory

B. Chinna Lingana Gouda  
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

Page:1

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4634

Issue Date: 22.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 18.03.2023
6. Date of Sample Receipt : 20.03.2023
7. Sample Code : 5119
8. Analysis Starting Date : 20.03.2023
9. Analysis Completion Date : 22.03.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

Page:2

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4995

Issue Date: 28.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 24.03.2023
6. Date of Sample Receipt : 25.03.2023
7. Sample Code : 5563
8. Analysis Starting Date : 25.03.2023
9. Analysis Completion Date : 28.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	58.8	60.4	57.6	µg / m <sup>3</sup>	58.93	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	21.4	23.2	20.6	µg / m <sup>3</sup>	21.73	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	10.8	11.8	9.6	µg / m <sup>3</sup>	10.73	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	19.2	20.6	18.4	µg / m <sup>3</sup>	19.40	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	100
6	Lead	IS-5182(Part22)	0.080	0.081	0.084	µg / m <sup>3</sup>	0.082	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.32	0.36	mg / m <sup>3</sup>	0.32	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.24	1.26	µg / m <sup>3</sup>	1.23	20

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

Analysed by



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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4995

Issue Date: 28.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 24.03.2023
6. Date of Sample Receipt : 25.03.2023
7. Sample Code : 5563
8. Analysis Starting Date : 25.03.2023
9. Analysis Completion Date : 28.03.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

:- END OF REPORT :-

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

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4996

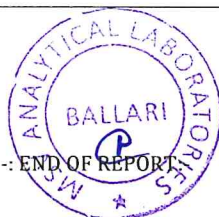
Issue Date: 28.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 24.03.2023
6. Date of Sample Receipt : 25.03.2023
7. Sample Code : 5564
8. Analysis Starting Date : 25.03.2023
9. Analysis Completion Date : 28.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	53.4	55.8	52.6	µg / m <sup>3</sup>	53.9	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	17.4	18.6	16.8	µg / m <sup>3</sup>	17.6	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.8	8.4	6.8	µg / m <sup>3</sup>	7.7	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	14.6	15.8	14.2	µg / m <sup>3</sup>	14.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.2	9.4	7.6	µg / m <sup>3</sup>	8.4	100
6	Lead	IS-5182(Part22)	0.030	0.031	0.034	µg / m <sup>3</sup>	0.032	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.22	0.24	0.26	mg / m <sup>3</sup>	0.24	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.12	1.16	1.14	ng / m <sup>3</sup>	1.14	20

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

Analysed by



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

:- END OF REPORT

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4996

Issue Date: 28.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 24.03.2023
6. Date of Sample Receipt : 25.03.2023
7. Sample Code : 5564
8. Analysis Starting Date : 25.03.2023
9. Analysis Completion Date : 28.03.2023
10. Sample Tested as Received

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

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4997

Issue Date: 28.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 24.03.2023
6. Date of Sample Receipt : 25.03.2023
7. Sample Code : 5565
8. Analysis Starting Date : 25.03.2023
9. Analysis Completion Date : 28.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	55.4	54.8	54.2	µg / m <sup>3</sup>	54.8	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	16.2	15.8	15.6	µg / m <sup>3</sup>	15.9	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	8.2	7.8	6.6	µg / m <sup>3</sup>	7.5	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	13.8	12.6	11.4	µg / m <sup>3</sup>	12.6	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	6.2	6.0	6.4	µg / m <sup>3</sup>	6.2	100
6	Lead	IS-5182(Part22)	0.022	0.026	0.024	µg / m <sup>3</sup>	0.024	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.38	0.40	0.36	mg / m <sup>3</sup>	0.38	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.38	1.40	ng / m <sup>3</sup>	1.38	20

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

Analysed by



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

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

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4997

Issue Date: 28.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 24.03.2023
6. Date of Sample Receipt : 25.03.2023
7. Sample Code : 5565
8. Analysis Starting Date : 25.03.2023
9. Analysis Completion Date : 28.03.2023
10. Sample Tested as Received

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

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



Authorized Signatory

B.Chinnna Lingana Gouda  
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,  
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4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.  
5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.





# MSV Analytical Laboratories

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

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

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4998

Issue Date: 28.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 24.03.2023
6. Date of Sample Receipt : 25.03.2023
7. Sample Code : 5566
8. Analysis Starting Date : 25.03.2023
9. Analysis Completion Date : 28.03.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	55.4	55.8	53.6	µg / m <sup>3</sup>	54.9	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	20.8	21.4	20.4	µg / m <sup>3</sup>	20.9	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.8	8.6	7.2	µg / m <sup>3</sup>	7.9	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	16.2	17.4	15.6	µg / m <sup>3</sup>	16.4	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.2	8.4	8.6	µg / m <sup>3</sup>	8.4	100
6	Lead	IS-5182(Part22)	0.020	0.024	0.022	µg / m <sup>3</sup>	0.022	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.22	0.26	0.20	mg / m <sup>3</sup>	0.23	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.24	1.26	µg / m <sup>3</sup>	1.23	20

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



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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalbellary01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/4998

Issue Date: 28.03.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 24.03.2023
6. Date of Sample Receipt : 25.03.2023
7. Sample Code : 5566
8. Analysis Starting Date : 25.03.2023
9. Analysis Completion Date : 28.03.2023
10. Sample Tested as Received

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

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

Analysed by



:- END OF REPORT :-

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msval01@gmail.com Web ID : www.msvalbellary.com

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MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5232

Issue Date: 01.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 30.03.2023
6. Date of Sample Receipt : 31.03.2023
7. Sample Code : 5818
8. Analysis Starting Date : 31.03.2023
9. Analysis Completion Date : 01.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	52.4	54.8	51.6	µg / m <sup>3</sup>	52.9	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	24.8	26.6	24.2	µg / m <sup>3</sup>	25.2	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	10.8	11.4	10.2	µg / m <sup>3</sup>	10.8	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.8	20.4	17.8	µg / m <sup>3</sup>	19.0	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	11.4	13.4	10.8	µg / m <sup>3</sup>	11.9	100
6	Lead	IS-5182(Part22)	0.030	0.028	0.026	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.26	0.24	mg / m <sup>3</sup>	0.26	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.34	1.38	1.36	µg / m <sup>3</sup>	1.36	20

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



Authorized Signatory  
Renukamma  
Quality Manager

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5232

Issue Date: 01.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 30.03.2023
6. Date of Sample Receipt : 31.03.2023
7. Sample Code : 5818
8. Analysis Starting Date : 31.03.2023
9. Analysis Completion Date : 01.04.2023
10. Sample Tested as Received

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

µg

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

Analysed by



Authorized Signatory

Renukamma  
Quality Manager

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5233

Issue Date: 01.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 30.03.2023
6. Date of Sample Receipt : 31.03.2023
7. Sample Code : 5819
8. Analysis Starting Date : 31.03.2023
9. Analysis Completion Date : 01.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	54.8	56.2	54.4	µg / m <sup>3</sup>	55.1	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	17.8	18.8	16.4	µg / m <sup>3</sup>	17.7	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	7.8	8.4	6.6	µg / m <sup>3</sup>	7.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.2	20.8	17.4	µg / m <sup>3</sup>	18.8	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	8.4	8.6	7.4	µg / m <sup>3</sup>	8.1	100
6	Lead	IS-5182(Part22)	0.026	0.030	0.028	µg / m <sup>3</sup>	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.30	0.34	0.32	mg / m <sup>3</sup>	0.32	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.32	1.30	µg / m <sup>3</sup>	1.30	20

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

Analysed by



Authorized Signatory

Renukamma  
Quality Manager

END OF REPORT:-

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

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5233

Issue Date: 01.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 30.03.2023
6. Date of Sample Receipt : 31.03.2023
7. Sample Code : 5819
8. Analysis Starting Date : 31.03.2023
9. Analysis Completion Date : 01.04.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager



END OF REPORT

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

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5234

Issue Date: 01.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 30.03.2023
6. Date of Sample Receipt : 31.03.2023
7. Sample Code : 5820
8. Analysis Starting Date : 31.03.2023
9. Analysis Completion Date : 01.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	60.4	58.8	59.2	µg / m <sup>3</sup>	59.5	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	24.8	22.4	22.2	µg / m <sup>3</sup>	23.1	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.4	8.6	8.2	µg / m <sup>3</sup>	8.7	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	17.8	16.4	16.6	µg / m <sup>3</sup>	16.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	9.2	8.8	8.4	µg / m <sup>3</sup>	8.8	100
6	Lead	IS-5182(Part22)	0.026	0.028	0.024	µg / m <sup>3</sup>	0.026	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.26	0.28	mg / m <sup>3</sup>	0.26	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.40	1.36	1.38	µg / m <sup>3</sup>	1.38	20

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

Analysed by



Authorized Signatory  
Renukamma  
Quality Manager

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

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5234

Issue Date: 01.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 30.03.2023
6. Date of Sample Receipt : 31.03.2023
7. Sample Code : 5820
8. Analysis Starting Date : 31.03.2023
9. Analysis Completion Date : 01.04.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager



Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 9945456764, 08392-255169

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

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5235

Issue Date: 01.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 30.03.2023
6. Date of Sample Receipt : 31.03.2023
7. Sample Code : 5821
8. Analysis Starting Date : 31.03.2023
9. Analysis Completion Date : 01.04.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM <sub>10</sub>	IS-5182(Part-23)	60.4	58.8	59.6	µg / m <sup>3</sup>	59.6	100
2	Particulate Matter or PM <sub>2.5</sub>	LAB SOP MSVAL/SOP/A/005	24.6	22.8	21.4	µg / m <sup>3</sup>	22.9	60
3	Sulphur Dioxide as SO <sub>2</sub>	IS-5182(Part-2)	9.4	8.8	7.6	µg / m <sup>3</sup>	8.6	80
4	Oxides of Nitrogen as NO <sub>x</sub>	IS-5182(Part-6)	18.2	16.6	15.8	µg / m <sup>3</sup>	16.9	80
5	Ozone as O <sub>3</sub>	IS 5182(part-9)	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	100
6	Lead	IS-5182(Part22)	0.026	0.024	0.028	µg / m <sup>3</sup>	0.026	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.30	0.32	mg / m <sup>3</sup>	0.30	2
8	Ammonia as NH <sub>3</sub>	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m <sup>3</sup>	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.24	1.26	1.22	µg / m <sup>3</sup>	1.38	20

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

Analysed by



Authorized Signatory

Renukamma  
Quality Manager

END OF REPORT:-

Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/16/03

## ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/5235

Issue Date: 01.04.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 30.03.2023
6. Date of Sample Receipt : 31.03.2023
7. Sample Code : 5821
8. Analysis Starting Date : 31.03.2023
9. Analysis Completion Date : 01.04.2023
10. Sample Tested as Received

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

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

Analysed by

Authorized Signatory

Renukamma  
Quality Manager



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

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

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/4654

Report Issued Date : 22.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Screening & Store
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 18.03.2023
6. Sample Code : 5140
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion Date : 22.03.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	18.03.2023
Fuel Used	---
Stack Temperature (°C)	45
Velocity (m/s)	6.4
Height (m)	15mtrs AGL
Diameter (m)	0.7
Cross sectional area (m <sup>2</sup> )	0.38465

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	32.5	50

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

Analysed by



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

Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalbellary@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/4655

Report Issued Date: 22.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Cutter
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 18.03.2023
6. Sample Code : 5141
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion Date : 22.03.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	18.03.2023
Fuel Used	---
Stack Temperature (°C)	44
Velocity (m/s)	4.1
Height (m)	15mtrs AGL
Diameter (m)	0.7
Cross sectional area (m <sup>2</sup> )	0.38465

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	32.3	50

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

Analysed by



:- END OF REPORT:-

Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

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

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

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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com MSVAL/A/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/4656

Report Issued Date : 22.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coal Crushing Area
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 18.03.2023
6. Sample Code : 5142
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion Date : 22.03.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	18.03.2023
Fuel Used	---
Stack Temperature (°C)	33
Velocity (m/s)	5.5
Height (m)	15mtrs AGL
Diameter (m)	0.75
Cross sectional area (m <sup>2</sup> )	0.44156

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	26	50

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

Analysed by



:- END OF REPORT :-

Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

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

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MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/2559

Report Issued Date: 23.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Ferro Alloy Arc Furnace 5
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 18.03.2023
6. Sample Code : 2905
7. Analysis Starting Date : 25.02.2023
8. Analysis Completion Date : 23.03.2023
9. Sample Tested as Received

## GENERAL DETAILS

Date of Monitoring	18.03.2023
Fuel Used	----
Stack Temperature (°C)	40
Velocity (m/s)	6.56
Height (m)	35 mtrs AGL
Diameter (m)	2.5
Cross sectional area (m <sup>2</sup> )	4.90625
Flow/Discharge Rate of Gas Nm <sup>3</sup> /Hr	120811.5

## RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	31.8	150
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm <sup>3</sup>	20.2	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm <sup>3</sup>	32.5	500
Carbon Monoxide as(CO)	IS 13270	%	0.32	Max 1%
Oxygen as O <sub>2</sub>	Instrument Method	%	5.2	---

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

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda

Chief executive of the laboratory

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

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No:

Report Issued Date: 23.03.2023

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

### GENERAL DETAILS

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

### RESULTS

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

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

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

:- END OF REPORT:-

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

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/5126A

Report Issued Date : 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Oven Battery - Passes Through WHRB-1
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 23.03.2023
6. Sample Code : 5356
7. Analysis Starting Date : 28.03.2023
8. Analysis Completion Date : 30.03.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	23.03.2023
Fuel Used	----
Stack Temperature (°C)	120
Velocity (m/s)	6.61
Height (m)	60 mtrs AGL
Diameter (m)	4.6
Cross sectional area (m <sup>2</sup> )	16.61
Flow/Discharge Rate of Gas Nm <sup>3</sup> /Hr	275061.6

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	25.0	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm <sup>3</sup>	22.1	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm <sup>3</sup>	56.8	500
Carbon Monoxide as(CO)	IS 13270	%	0.24	Max 1%
Oxygen as O <sub>2</sub>	Instrument Method	%	5.20	---

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

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda  
Chief executive of the laboratory

:- END OF REPORT:-

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

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

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

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





# MSV Analytical Laboratories

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

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

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

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

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/5126

Report Issued Date : 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Oven Battery - Passes Through WHRB-2
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 23.03.2023
6. Sample Code : 5357
7. Analysis Starting Date : 28.03.2023
8. Analysis Completion Date : 30.03.2023
9. Sample Tested as Received

### GENERAL DETAILS

Date of Monitoring	23.03.2023
Fuel Used	----
Stack Temperature (°C)	150
Velocity (m/s)	7.12
Height (m)	60 mtrs AGL
Diameter (m)	4.6
Cross sectional area (m <sup>2</sup> )	16.61
Flow/Discharge Rate of Gas Nm <sup>3</sup> /Hr	425747.52

### RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm <sup>3</sup>	21.8	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm <sup>3</sup>	30.7	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm <sup>3</sup>	54.2	500
Carbon Monoxide as(CO)	IS 13270	%	0.26	Max 1%
Oxygen as O <sub>2</sub>	Instrument Method	%	6.2	---

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

Analysed by



:- END OF REPORT:-

Authorized Signatory

B.Chinnna Lingana Gouda

Chief executive of the laboratory

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

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

MSVAL/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5157

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water - Tungabhadra Reservoir
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
<b>Physical parameters</b>					
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	pH	IS : 3025(part-11)	---	7.46	6.5-8.5
5	Conductivity	IS-3025 (part 14)	µs/cm	874	---
<b>Chemical parameters</b>					
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	440	500
7	Calcium as Ca	IS : 3025(part-40)	mg/l	24.2	80.10
8	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	146.8	300
9	Magnesium as Mg	IS: 3025(part-46)	mg/l	20.9	24.28
10	Oil & Grease	IS : 3025(part-39)	mg/l	Nil	---
11	Mineral Oil	APHA 23 <sup>rd</sup> EDITION - 5520 C	mg/l	Nil	0.01
12	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	10.4	400
13	Chloride as Cl	IS : 3025(part-32)	mg/l	24.9	250
14	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	2.26	20
15	Iron as Fe	IS : 3025(part-53)	mg/l	0.004	0.3
16	Fluoride as F	IS : 3025(part-60)	mg/l	0.24	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	8.0	Min 6
19	Free CO <sub>2</sub>	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



Authorized Signature

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

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

MSVAL/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5157

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water - Tungabhadra Reservoir
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
Chemical parameters					
21	Manganese as Mn	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	0.014	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.026	15
23	Boron as B	APHA 23 <sup>rd</sup> EDITION -4500 B	mg/l	Nil	---
24	Barium as Ba	APHA 23 <sup>rd</sup> EDITION -3500 Ba	mg/l	0.003	1.0
25	Silver as Ag	APHA 23 <sup>rd</sup> EDITION -3500 Ag	mg/l	<0.001	0.05
26	Arsenic as As	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.002	0.05
27	Mercury as Hg	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.001	0.001
28	Lead as Pb	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.1
29	Cadmium as Cd	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.001	0.01
30	Chromium as Cr	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.05
31	Selenium as Se	APHA 23 <sup>rd</sup> EDITION -3500 B	mg/l	<0.001	0.01
32	Cyanide as CN	APHA 23 <sup>rd</sup> EDITION -4500 D	mg/l	Nil	0.05
33	Phenols	IS: 3025(part-43)	mg/l	Nil	0.002
34	Anionic Detergents as MBAS	IS : 13428-2005	mg/l	<0.1	0.2
35	Percent Sodium	LAB SOP	%	21.44	---
36	Sodium Absorption Ratio	LAB SOP	mg/l	11.1	---

### INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

Report Status: - The above parameters are within limits.

Verified by

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



Authorized Signature

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

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

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

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/5157

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Sample 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 : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion Date : 23.03.2023
9. Sample tested as Received

### RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS – 2296
Total Coliform	IS 1622:1981	MPN/100 ml	16	50

INFERENCE	IS – 2296 Standards, BDL – Below Detectable Limit 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,

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/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5158

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water - Canal Near Vyasanakere
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
<b>Physical parameters</b>					
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
4	pH	IS : 3025(part-11)	---	7.98	6.5-8.5
5	Conductivity	IS-3025 (part 14)	µs/cm	842	---
<b>Chemical parameters</b>					
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	430	500
7	Calcium as Ca	IS : 3025(part-40)	mg/l	16.2	80.10
8	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	100.4	300
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	14.6	24.28
10	Oil & Grease	IS : 3025(part-39)	mg/l	Nil	---
11	Mineral Oil	APHA 23 <sup>rd</sup> EDITION - 5520 C	mg/l	Nil	0.01
12	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	6.98	400
13	Chloride as Cl	IS : 3025(part-32)	mg/l	21.9	250
14	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	0.76	20
15	Iron as Fe	IS : 3025(part-53)	mg/l	0.002	0.3
16	Fluoride as F	IS : 3025(part-60)	mg/l	0.24	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	8.0	Min 6
19	Free CO <sub>2</sub>	LAB SOP	mg/l	Nil	---
20	Free Ammonia	LAB SOP	mg/l	Nil	---

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

Verified by



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

Authorized Signature

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

MSVAL/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5158

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water – Canal Near Vysanakere
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
Chemical parameters					
21	Manganese as Mn	APHA 23 <sup>rd</sup> 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 <sup>rd</sup> EDITION -4500 B	mg/l	Nil	---
24	Barium as Ba	APHA 23 <sup>rd</sup> EDITION -3500 Ba	mg/l	0.002	1.0
25	Silver as Ag	APHA 23 <sup>rd</sup> EDITION -3500 Ag	mg/l	<0.001	0.05
26	Arsenic as As	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.002	0.05
27	Mercury as Hg	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.001	0.001
28	Lead as Pb	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.1
29	Cadmium as Cd	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.001	0.01
30	Chromium as Cr	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.05
31	Selenium as Se	APHA 23 <sup>rd</sup> EDITION -3500 B	mg/l	<0.001	0.01
32	Cyanide as CN	APHA 23 <sup>rd</sup> 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	%	18.8	---
36	Sodium Absorption Ratio	LAB SOP	mg/l	10.3	---

### INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

Report Status: - The above parameters are within limits.

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/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/5158

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vysanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Surface water – Canal Near Vysanakere
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Sample Quantity : 250 ml (Sterilized Bottle)
5. Sample description/condition : Good/satisfactory
6. Date of sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion Date : 23.03.2023
9. Sample tested as Received

### RESULTS

Parameters	Protocol	Unit	Result	Standards as per IS - 2296
Total Coliform	IS 1622:1981	MPN/100 ml	20	50

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

Verified by



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

Authorized Signature



# MSV Analytical Laboratories

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

MSVAL/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5159

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water - Dhananayakana Kere Water
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
<b>Physical parameters</b>					
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
4	pH	IS : 3025(part-11)	---	8.00	6.5-8.5
5	Conductivity	IS-3025 (part 14)	µs/cm	746	---
<b>Chemical parameters</b>					
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	418	500
7	Calcium as Ca	IS : 3025(part-40)	mg/l	5.80	80.10
8	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	72.4	300
9	Magnesium as Mg	IS: 3025(part-46)	mg/l	14.1	24.28
10	Oil & Grease	IS : 3025(part-39)	mg/l	Nil	---
11	Mineral Oil	APHA 23 <sup>rd</sup> EDITION - 5520 C	mg/l	Nil	0.01
12	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	20.4	400
13	Chloride as Cl	IS : 3025(part-32)	mg/l	44.9	250
14	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	1.46	20
15	Iron as Fe	IS : 3025(part-53)	mg/l	0.002	0.3
16	Fluoride as F	IS : 3025(part-60)	mg/l	0.50	1.50
17	Bio-chemical Oxygen Demand (3 days at 27°C), Max	IS 3025 (Part 44): 1993	mg/l	Nil	2
18	Dissolved Oxygen	IS 3025 (Part 38): 1993	mg/l	7.4	Min 6
19	Free CO <sub>2</sub>	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



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

Authorized Signature

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

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

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

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





# MSV Analytical Laboratories

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

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

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

MSVAL/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5159

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water – Dhananayakana Kere Water
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
Chemical parameters					
21	Manganese as Mn	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	0.014	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.018	15
23	Boron as B	APHA 23 <sup>rd</sup> EDITION -4500 B	mg/l	Nil	---
24	Barium as Ba	APHA 23 <sup>rd</sup> EDITION -3500 Ba	mg/l	0.002	1.0
25	Silver as Ag	APHA 23 <sup>rd</sup> EDITION -3500 Ag	mg/l	<0.001	0.05
26	Arsenic as As	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.002	0.05
27	Mercury as Hg	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.001	0.001
28	Lead as Pb	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.1
29	Cadmium as Cd	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.001	0.01
30	Chromium as Cr	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.05
31	Selenium as Se	APHA 23 <sup>rd</sup> EDITION -3500 B	mg/l	<0.001	0.01
32	Cyanide as CN	APHA 23 <sup>rd</sup> EDITION -4500 D	mg/l	Nil	0.05
33	Phenols	IS: 3025(part-43)	mg/l	Nil	0.002
34	Anionic Detergents as MBAS	IS : 13428-2005	mg/l	<0.1	0.2
35	Percent Sodium	LAB SOP	%	20.3	---
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



\*\*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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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msvalbellary01@gmail.com Web ID : www.msvalbellary.com

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/5159

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Surface water – Dhananayakana Kere Water
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Sample Quantity : 250 ml (Sterilized Bottle)
5. Sample description/condition : Good/satisfactory
6. Date of sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion Date : 23.03.2023
9. Sample tested as Received

### RESULTS

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

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

Verified by



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

Authorized Signature

Note: 1. The results listed only to the tested samples & applicable parameters,  
2. Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.  
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Email : labmsv@gmail.com, msvalbellary2018@gmail.com, msv.lab01@gmail.com Web ID : www.msvalbellary.com

MSVAL/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5160

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water - Water body near Narayadevarakere
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
<b>Physical parameters</b>					
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
4	pH	IS : 3025(part-11)	---	8.14	6.5-8.5
5	Conductivity	IS-3025 (part 14)	µs/cm	760	---
<b>Chemical parameters</b>					
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	468	500
7	Calcium as Ca	IS : 3025(part-40)	mg/l	42.4	80.10
8	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	192.8	300
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	22.1	24.28
10	Oil & Grease	IS : 3025(part-39)	mg/l	Nil	---
11	Mineral Oil	APHA 23 <sup>rd</sup> EDITION - 5520 C	mg/l	Nil	0.01
12	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	29.2	400
13	Chloride as Cl	IS : 3025(part-32)	mg/l	99.9	250
14	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	0.90	20
15	Iron as Fe	IS : 3025(part-53)	mg/l	0.004	0.3
16	Fluoride as F	IS : 3025(part-60)	mg/l	0.44	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	8.0	Min 6
19	Free CO <sub>2</sub>	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

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

Authorized Signature

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

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

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

MSVAL/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5160

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water – Water body near  
Narayadevarakere
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
Chemical parameters					
21	Manganese as Mn	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	0.010	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.016	15
23	Boron as B	APHA 23 <sup>rd</sup> EDITION -4500 B	mg/l	Nil	---
24	Barium as Ba	APHA 23 <sup>rd</sup> EDITION -3500 Ba	mg/l	0.002	1.0
25	Silver as Ag	APHA 23 <sup>rd</sup> EDITION -3500 Ag	mg/l	<0.001	0.05
26	Arsenic as As	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.002	0.05
27	Mercury as Hg	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.001	0.001
28	Lead as Pb	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.1
29	Cadmium as Cd	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.001	0.01
30	Chromium as Cr	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.05
31	Selenium as Se	APHA 23 <sup>rd</sup> EDITION -3500 B	mg/l	<0.001	0.01
32	Cyanide as CN	APHA 23 <sup>rd</sup> EDITION -4500 D	mg/l	Nil	0.05
33	Phenols	IS: 3025(part-43)	mg/l	Nil	0.002
34	Anionic Detergents as MBAS	IS : 13428-2005	mg/l	<0.1	0.2
35	Percent Sodium	LAB SOP	%	22.2	---
36	Sodium Absorption Ratio	LAB SOP	mg/l	11.8	---

### INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

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

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/5160

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Sample 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 : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion Date : 23.03.2023
9. Sample tested as Received

### RESULTS

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

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

Verified by



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

Authorized Signature

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

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

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

MSVAL/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5161

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasankere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water - Pond Water Ayyanahalli
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
Physical parameters					
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
4	pH	IS : 3025(part-11)	---	8.04	6.5-8.5
5	Conductivity	IS-3025 (part 14)	µs/cm	648	---
Chemical parameters					
6	Total Dissolved Solids	IS : 3025(part-16)	mg/l	424	500
7	Calcium as Ca	IS : 3025(part-40)	mg/l	32.0	80.10
8	Total Hardness as CaCO <sub>3</sub>	IS : 3025(part-21)	mg/l	160.4	300
9	Magnesium as Mg	IS : 3025(part-46)	mg/l	19.5	24.28
10	Oil & Grease	IS : 3025(part-39)	mg/l	Nil	---
11	Mineral Oil	APHA 23 <sup>rd</sup> EDITION - 5520 C	mg/l	Nil	0.01
12	Sulphate as SO <sub>4</sub>	IS : 3025(part-24)	mg/l	17.2	400
13	Chloride as Cl	IS : 3025(part-32)	mg/l	134.9	250
14	Nitrate as NO <sub>3</sub>	IS : 3025(part-34)	mg/l	1.30	20
15	Iron as Fe	IS : 3025(part-53)	mg/l	0.003	0.3
16	Fluoride as F	IS : 3025(part-60)	mg/l	0.38	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	8.0	Min 6
19	Free CO <sub>2</sub>	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

\*\*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/W/F/13/00

## ANALYSIS REPORT OF WATER QUALITY

Test Report No : MSVAL/2023/5161

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasanakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Surface water - Pond Water Ayyanahalli
3. Sample Collected By : MSV Analytical Laboratories
4. Sample Quantity : 2 Liters
5. Sample Description/condition : Good/Satisfactory
6. Date of Sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion date : 23.03.2023
9. Sample tested As Received

S.No	Parameters	Protocol	Unit	Result	Standards as per IS - 2296
Chemical parameters					
21	Manganese as Mn	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	0.010	0.5
22	Zinc as Zn	IS: 3025(part-49)	mg/l	0.012	15
23	Boron as B	APHA 23 <sup>rd</sup> EDITION -4500 B	mg/l	Nil	---
24	Barium as Ba	APHA 23 <sup>rd</sup> EDITION -3500 Ba	mg/l	0.002	1.0
25	Silver as Ag	APHA 23 <sup>rd</sup> EDITION -3500 Ag	mg/l	<0.001	0.05
26	Arsenic as As	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.002	0.05
27	Mercury as Hg	APHA 23 <sup>rd</sup> EDITION -3112 B	mg/l	<0.001	0.001
28	Lead as Pb	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.1
29	Cadmium as Cd	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.001	0.01
30	Chromium as Cr	APHA 23 <sup>rd</sup> EDITION -3111 B	mg/l	<0.002	0.05
31	Selenium as Se	APHA 23 <sup>rd</sup> EDITION -3500 B	mg/l	<0.001	0.01
32	Cyanide as CN	APHA 23 <sup>rd</sup> EDITION -4500 D	mg/l	Nil	0.05
33	Phenols	IS: 3025(part-43)	mg/l	Nil	0.002
34	Anionic Detergents as MBAS	IS : 13428-2005	mg/l	<0.1	0.2
35	Percent Sodium	LAB SOP	%	20.8	---
36	Sodium Absorption Ratio	LAB SOP	mg/l	10.8	---

### INFERENCE

IS - 2296 Standards, BDL - Below Detectable Limit

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,

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

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

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

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

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# MSV Analytical Laboratories

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

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

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

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

MSVAL/A/F/18/03

## ANALYSIS REPORT FOR WATER IN MICROBIOLOGY

Test Report No : MSVAL/2023/5161

Report Issued Date: 30.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.  
(Metal & Ferro Alloys Plant)  
Vyasnakere, Hanumanahalli Village,  
Hospet Taluk, Bellary District, Karnataka.
2. Sample Type : Surface water – Pond Water Ayyanahalli
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Sample Quantity : 250 ml (Sterilized Bottle)
5. Sample description/condition : Good/satisfactory
6. Date of sample Receipt : 18.03.2023
7. Analysis Starting Date : 20.03.2023
8. Analysis Completion Date : 23.03.2023
9. Sample tested as Received

### RESULTS

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

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



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

Authorized Signature