

The Sandur Manganese & Iron Ores Limited

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

REGISTERED OFFICE

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



CORPORATE OFFICE

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

Ref No: SMIORE/MINES/ENV/2024-25/2679/ 1041

08 November 2024

To,
The Environmental Officer,
Karnataka State Pollution Control Board,
Ward No.25, 4th Main Road,
Kuvempu Nagar,
Ballari - 583104

Dear Sir,

Sub: Submission of reports pertaining to monitoring of environmental parameters for the month of October 2024 in respect of Mining Lease No. 2679.

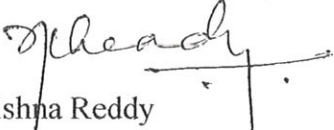
Ref: 1. Environmental Clearance No. 110015/88/2006-IA.II(M) dated 24 January 2007.
2. Consent for Operation No. AW-337273 dated 10 April 2023.

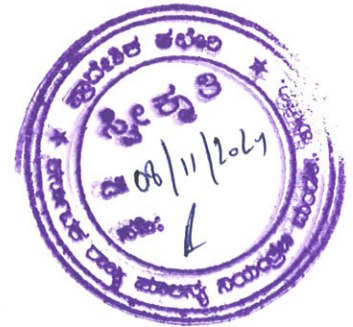
With reference to the letters cited above, we are enclosing herewith environmental monitoring reports prepared after monitoring the stipulated environmental parameters for the month of October 2024 in respect of Mining Lease No. 2679 of The Sandur Manganese & Iron Ores Limited.

Kindly acknowledge the receipt of the reports.

Thank you,

for The Sandur Manganese & Iron Ores Limited,


Krishna Reddy
Vice President - Mines Operations



Encl: Monitoring Reports

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

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

ENVIRONMENTAL MONITORING REPORT

October, 2024

**Project : Ramgad Manganese Ore Mine
ML No. 2679**

**Ramgad Village, Sandur Taluk,
Ballari Dist., Karnataka.**

Lessee

The Sandur Manganes & Iron Ores Limited

ENVIRONMENTAL LABORATORY

(Unit of Mineral Engineering Services)

(Accredited by NABL &, MOEF&CC Under E(P) 1986)

#948, 2nd Cross, Kammanahalli Main Road,
St Thomas Town Post, Bangalore- 560 084, Karnataka,

LIST OF TABLES

SL. NO.	PARTICULARS	Table No.
1	Test Report of Ambient Air Quality	1 to 10
2	Test Report of Fugitive Air Quality	11
3	Dust Fall Measurement	12
4	Ambient Noise Monitoring Report	13
5	Source Noise Monitoring Report	14
6	Surface Water Test Report	15
7	Stack Monitoring Report	16 & 17



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TEST REPORT

Table No.1

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited						
Name of the Project : Mining Lease No. 2679						
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)						
Station at & Code : A1, Core Zone (ML Area)						
Duration : 24 Hrs						
Issue date : 02.11.2024						
Reference IS 5182 & Lab SOP						
Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0042	9	12	30	16	0.32
05.10.2024	N/24/10/2-0116	7	10	43	25	0.28
09.10.2024	N/24/10/3-0076	9	10	52	29	0.21
10.10.2024	N/24/10/3-0128	10	11	50	25	0.42
14.10.2024	N/24/10/4-0014	9	12	41	22	0.39
15.10.2024	N/24/10/4-0060	10	11	35	19	0.36
23.10.2024	N/24/10/5-0093	10	12	56	30	0.48
24.10.2024	N/24/10/5-0127	10	14	48	25	0.44
30.10.2024	N/24/11/1-0081	9	12	41	28	0.25
31.10.2024	N/24/11/1-0107	11	10	50	26	0.31
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

Arshiya Kousar
ARSHIYA KOUSAR
Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.

Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in



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TEST REPORT

Table No.2

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited
 Name of the Project : Mining Lease No. 2679
 Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
 Station at & Code : A2, Core Zone (Myadara Banda Block)
 Duration : 24 Hrs
 Issue date : 02.11.2024
 Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0043	8	11	51	28	0.22
05.10.2024	N/24/10/2-0117	10	13	40	22	0.20
09.10.2024	N/24/10/3-0078	9	14	50	28	0.25
10.10.2024	N/24/10/3-0129	9	11	40	24	0.21
14.10.2024	N/24/10/4-0015	6	10	31	18	0.22
15.10.2024	N/24/10/4-0062	5	9	44	21	0.41
23.10.2024	N/24/10/5-0095	8	9	50	26	0.39
24.10.2024	N/24/10/5-0129	10	11	39	19	0.38
30.10.2024	N/24/11/1-0083	9	10	46	25	0.42
31.10.2024	N/24/11/1-0109	12	12	54	32	0.34
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

Arushi Kousar
 ARSHIYA KOUSAR
 Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No.3

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited						
Name of the Project : Mining Lease No. 2679						
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)						
Station at & Code : A3, Core Zone (Governor Point)						
Duration : 24 Hrs						
Issue date : 02.11.2024						
Reference IS 5182 & Lab SOP						
Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0044	11	12	55	29	0.26
05.10.2024	N/24/10/2-0118	9	10	50	27	0.31
09.10.2024	N/24/10/3-0079	7	9	50	27	0.42
10.10.2024	N/24/10/3-0130	8	11	55	29	0.28
14.10.2024	N/24/10/4-0016	12	14	44	23	0.33
15.10.2024	N/24/10/4-0063	10	11	30	17	0.31
23.10.2024	N/24/10/5-0096	6	9	58	32	0.39
24.10.2024	N/24/10/5-0130	10	12	51	27	0.35
30.10.2024	N/24/11/1-0084	7	10	53	27	0.28
31.10.2024	N/24/11/1-0110	10	12	47	24	0.45
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

Arshiya Kousar
ARSHIYA KOUSAR
Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No.4

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited
 Name of the Project : Mining Lease No. 2679
 Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
 Station at & Code : A4, Core Zone (Neerlabi)
 Duration : 24 Hrs
 Issue date : 02.11.2024
 Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0045	10	11	46	24	0.26
05.10.2024	N/24/10/2-0119	9	11	48	24	0.25
09.10.2024	N/24/10/3-0080	11	12	39	18	0.47
10.10.2024	N/24/10/3-0131	10	16	56	28	0.42
14.10.2024	N/24/10/4-0017	8	11	45	25	0.32
15.10.2024	N/24/10/4-0064	9	10	40	24	0.38
23.10.2024	N/24/10/5-0097	11	14	49	26	0.41
24.10.2024	N/24/10/5-0131	7	12	58	33	0.48
30.10.2024	N/24/11/1-0085	10	13	45	25	0.35
31.10.2024	N/24/11/1-0111	11	14	57	26	0.46
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

Arshiya Kousar
 ARSHIYA KOUSAR
 Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No.5

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited
 Name of the Project : Mining Lease No. 2679
 Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
 Station at & Code : A5, Ramghad village
 Duration : 24 Hrs
 Issue date : 02.11.2024
 Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0046	12	14	35	18	0.22
05.10.2024	N/24/10/2-0120	10	11	43	20	0.25
09.10.2024	N/24/10/3-0081	13	14	51	26	0.33
10.10.2024	N/24/10/3-0132	11	11	43	24	0.23
14.10.2024	N/24/10/4-0018	10	13	48	25	0.28
15.10.2024	N/24/10/4-0065	10	14	33	17	0.25
23.10.2024	N/24/10/5-0098	9	11	47	24	0.32
24.10.2024	N/24/10/5-0132	10	12	53	27	0.26
30.10.2024	N/24/11/1-0086	7	9	45	26	0.41
31.10.2024	N/24/11/1-0112	10	11	54	28	0.28
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

Arshiya Kousar
 ARSHIYA KOUSAR
 Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No.6

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited
 Name of the Project : Mining Lease No. 2679
 Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
 Station at & Code : A6, Dharmapura village
 Duration : 24 Hrs
 Issue date : 02.11.2024
 Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0047	7	13	38	18	0.36
05.10.2024	N/24/10/2-0121	8	11	45	25	0.38
09.10.2024	N/24/10/3-0082	10	12	48	26	0.22
10.10.2024	N/24/10/3-0133	9	11	28	20	0.27
14.10.2024	N/24/10/4-0019	11	13	30	22	0.26
15.10.2024	N/24/10/4-0066	10	12	32	19	0.38
23.10.2024	N/24/10/5-0099	6	9	45	24	0.33
24.10.2024	N/24/10/5-0133	10	12	55	28	0.35
30.10.2024	N/24/11/1-0087	8	12	45	26	0.41
31.10.2024	N/24/11/1-0113	5	10	53	29	0.28
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

Arshiya Kousar
 ARSHIYA KOUSAR
 Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No.7

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited						
Name of the Project : Mining Lease No. 2679						
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)						
Station at & Code : A7, Garaga village						
Duration : 24 Hrs						
Issue date : 02.11.2024						
Reference IS 5182 & Lab SOP						
Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0048	11	14	48	25	0.25
05.10.2024	N/24/10/2-0122	10	12	46	24	0.44
09.10.2024	N/24/10/3-0083	7	9	41	25	0.20
10.10.2024	N/24/10/3-0134	8	9	44	23	0.21
14.10.2024	N/24/10/4-0020	9	10	46	25	0.25
15.10.2024	N/24/10/4-0067	11	12	29	19	0.22
23.10.2024	N/24/10/5-0100	10	14	52	28	0.24
24.10.2024	N/24/10/5-0134	9	11	40	23	0.38
30.10.2024	N/24/11/1-0088	7	10	49	27	0.25
31.10.2024	N/24/11/1-0114	10	11	35	18	0.23
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

Arshiya Kousar
ARSHIYA KOUSAR
Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No.8

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited						
Name of the Project : Mining Lease No. 2679						
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)						
Station at & Code : A8, Yeswanthanagar						
Duration : 24 Hrs						
Issue date : 02.11.2024						
Reference IS 5182 & Lab SOP						
Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0037	11	14	48	25	0.21
05.10.2024	N/24/10/2-0112	9	11	51	27	0.22
07.10.2024	N/24/10/2-0187	7	9	42	26	0.25
08.10.2024	N/24/10/3-0009	9	10	58	33	0.42
18.10.2024	N/24/10/4-0171	10	12	48	25	0.36
19.10.2024	N/24/10/4-0236	11	13	50	26	0.27
21.10.2024	N/24/10/5-0010	9	11	56	29	0.22
22.10.2024	N/24/10/5-0060	11	13	48	25	0.35
28.10.2024	N/24/11/1-0010	10	12	53	27	0.42
29.10.2024	N/24/11/1-0050	12	14	55	28	0.25
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

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Dy. T.M. - Chemical

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TEST REPORT

Table No.9

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited						
Name of the Project : Mining Lease No. 2679						
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)						
Station at & Code : A9, Subbarayanahalli						
Duration : 24 Hrs						
Issue date : 02.11.2024						
Reference IS 5182 & Lab SOP						
Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0033	6	9	38	18	0.35
05.10.2024	N/24/10/2-0108	9	13	41	24	0.42
07.10.2024	N/24/10/2-0183	11	12	40	19	0.48
08.10.2024	N/24/10/3-0005	7	11	54	27	0.33
18.10.2024	N/24/10/4-0167	8	9	46	23	0.36
19.10.2024	N/24/10/4-0232	10	10	50	26	0.28
21.10.2024	N/24/10/5-0006	9	13	37	18	0.41
22.10.2024	N/24/10/5-0056	6	10	33	18	0.34
28.10.2024	N/24/11/1-0006	8	11	45	25	0.28
29.10.2024	N/24/11/1-0046	11	13	55	28	0.31
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

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Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No.10

AMBIENT AIR QUALITY

Name of the Client : The Sandur Manganese & Iron Ores Limited
 Name of the Project : Mining Lease No. 2679
 Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
 Station at & Code : A10, Siddapura village
 Duration : 24 Hrs
 Issue date : 02.11.2024
 Reference IS 5182 & Lab SOP

Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter		Carbon Monoxide* (CO), mg/m ³
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	
04.10.2024	N/24/10/2-0049	11	14	51	26	0.38
05.10.2024	N/24/10/2-0123	9	10	48	26	0.22
09.10.2024	N/24/10/3-0077	7	9	54	27	0.35
10.10.2024	N/24/10/3-0135	10	12	42	24	0.41
14.10.2024	N/24/10/4-0021	9	11	46	26	0.45
15.10.2024	N/24/10/4-0061	12	13	38	22	0.34
23.10.2024	N/24/10/5-0094	7	9	53	27	0.29
24.10.2024	N/24/10/5-0128	9	11	54	28	0.38
30.10.2024	N/24/11/1-0082	11	10	43	21	0.42
31.10.2024	N/24/11/1-0108	9	12	52	27	0.33
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

Arshiya Kousar
 ARSHIYA KOUSAR
 Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.

Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in



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TEST REPORT

Table No. 11

Fugitive Emission

Name of the Client	: The Sandur Manganese & Iron Ores Limited		
Name of the Project	: Mining Lease No. 2679		
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)		
Duration	: 08 Hrs		
Issue Date	: 02.11.2024		
Station at & Code	Date of sample	Lab Code	Particulate mater ($\mu\text{g}/\text{m}^3$)
FA1, Loading point	09.10.2024	N/24/10/3-0084	385
FA2, Dumping point	09.10.2024	N/24/10/3-0085	425
FA3, Haulage Road	09.10.2024	N/24/10/3-0086	486
FA4, Stack Yard	10.10.2024	N/24/10/3-0136	342
FA5, Drilling Point	10.10.2024	N/24/10/3-0137	463
FA6, Waste Dumping Point	10.10.2024	N/24/10/3-0138	496
Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)			
			Particulate mater ($\mu\text{g}/\text{m}^3$)
Permissible limits for Fugitive Emissions			600 $\mu\text{g}/\text{m}^3$

Arshiya Kousar
ARSHIYA KOUSAR
Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.

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TEST REPORT

Table No. 12

Analysis Report of Dust Fall Measurement

1	Name of the Client	The Sandur Manganese & Iron Ores Limited
2	Name of the Project	Mining Lease No. 2679
3	Month	01.10.2024 to 31.10.2024
4	Sample Type	Total Dust Fall Rate
5	Duration of Monitoring	One Month
6	Issue Date	02.11.2024

Result

Code	Location	Result	unit	Reference Method
DF1	Mine Office Area	0.011	g/m ² month	IS 5182 (Part 01) : 2006
DF2	Near Crusher Area	0.013	g/m ² month	IS 5182 (Part 01) : 2006

Arshiya Kousar
ARSHIYA KOUSAR
Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No. 13

AMBIENT NOISE LEVEL DATA

Report No : ELMES082410

Report No. FEM200024

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2679
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of monitoring	: 14.10.2024
Issue Date	: 02.11.2024

Code No.	Monitoring stations	Day			Night		
		L _{min}	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}
Corezone							
N1	Core zone ML Area	38.0	47.8	55.0	34.0	42.8	47.3
N2	Myadara Banda Block	41.0	51.2	57.2	34.0	40.4	44.2
N3	Goerner Point	39.0	53.9	60.0	33.8	40.5	47.2
N4	Neerlabbi	36.0	49.9	57.4	34.0	42.4	48.0
Buffer zone							
N5	Ramgad village	36.0	47.8	54.3	34.0	40.8	43.6
N6	Dharmapura	37.0	47.4	53.2	35.0	38.3	41.6
N7	Garaga village	35.0	44.5	47.5	33.0	37.3	41.0
N8	Yeshwanthanagar	41.0	49.5	54.2	34.0	40.1	44.6
N9	Subbarayanahalli	40.0	50.2	55.3	33.3	41.1	44.0
N10	Siddapura	38.0	49.4	56.1	34.6	42.2	45.0

<u>Permissible Limits of Ambient Noise Levels as per CPCB Guidelines</u>		
	Leq. Limit dB(A)	
	Day	Night
Industrial areas	75	70
Commercial area	65	55
Residential area	55	45

Arshiya Kousar
ARSHIYA KOUSAR
Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No. 14

NOISE LEVEL DATA

Report No : ELMES092410

Name of the Client		: M/s. Sandur Manganese & Iron Ores Limited			
Name of the Project		: Mining Lease No. 2679			
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services)			
Date of monitoring		: 15.10.2024			
Issue Date		: 02.11.2024			
Code No.	Monitoring stations	Day			Remarks
		L _{min}	L _{eq}	L _{max}	
Source					
N1	Loading Point	42.0	56.7	63.0	During operation
N2	Dumping Point	43.0	66.6	75.0	During operation
N3	Haulage Road	40.0	69.6	79.0	During operation
Heavy Earth Moving Machineries					
N4	Wheel Loader	43.0	79.5	86.0	During operation in side of the cabin
		38.0	74.1	78.0	During operation 10mts outside of the cabin
N5	Tata Hitachi 200LC	41.0	74.0	80.0	During operation in side of the cabin
		37.0	70.8	75.0	During operation 10mts outside of the cabin
Permissible limits as per ILO Code of Practice					
For Unprotected ear - 8 hrs working shift					
Warning limit - 85 dB(A)					
Danger limit - 90 dB(A)					
Worker not to be exposed for more than 115 dB(A)					
With ear protection -					
130 dB(A) 'Impulse' or 120 dB(A) 'Fast'					
No entry when noise level exceeds 140 dB(A)					
Permissible Limits of Ambient					
Noise Levels as per CPCB Guidelines					
Leq. Limit dB(A)					
Day Night					
Industrial areas 75 70					
Commerecial area 65 55					
Residential area 55 45					

Arushiya Kousar
 ARSHIYA KOUSAR
 Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

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Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in



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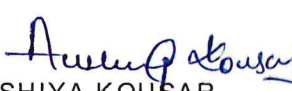
TEST REPORT

Table No.15

Name of the Client		: The Sandur Manganese & Iron Ores Limited					
Name of the Project		: Mining Lease No. 2679					
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services)					
Particulars of sample collected		: SW1 - Ragavapura kere water, SW2 - Dhananayakana kere water					
		: SW3 - Narihalla Upstream water, SW4 - Narihalla Downstream water					
Date of sample collection		: 09.10.2024					
Issue Date		: 29.10.2024					
Ref:IS : 2296, 1982 Class C Norms (Stream Water Standards)							
Sample Code		SW1	SW2	SW3	SW4	Limits For Stream Water Standards	Method of Testing
Sl.No.	Lab Code	N/24/10/2-0238	N/24/10/2-0239	N/24/10/2-0240	N/24/10/2-0241		
	Parameters	Results					
1	pH	8.20	7.93	7.90	8.25	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units), Max	5	20	10	15	300	IS:3025(Part-4)2021
3	Odour	Agreeable	Agreeable	Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l), Max	120	146	250	302	1500	IS:3025(Part-16)2023
5	Total Suspended Solids, mg/l	62	60	110	80	-	IS 3025 (P-17) 2022
6	Dissolved Oxygen (as O ₂), mg/l, Max	5.6	5.5	5.30	5.30	Min 4	IS:3025(Part-38)1989RA 2019
7	Biochemical Oxygen Demand (as O ₂), mg/l	<3.0	<3.0	<3.0	<3.0	3	IS:3025(P-44) 2014
8	Oil & Greease, mg/l	<0.1	<0.1	<0.1	<0.1	0.1	IS:3025(Part 39)2021
9	Total Hardness (as CaCO ₃),mg/l,Max	74	84	110	120	-	IS:3025 (P-21):2009 RA 2019
10	Sulphates as SO ₄ (mg/l), Max	20	28	38	42	400	IS:3025(P-24)Sec 1 2022
11	Phosphates (as P), mg/l	<0.05	<0.05	<0.05	<0.05	-	IS 3025 (P-31) Sec 1 2022
12	Chloride (as Cl),mg/l, Max	13	26	60.0	65	600	IS:3025(Part-32) ;1988RA2019
13	Fluoride (as F),mg/l, Max	0.4	0.32	0.81	0.78	1.5	APHA 23rd Edition 4500F
14	Sulphide (as H ₂ S) , mg/l, Max	<0.01	<0.01	<0.01	<0.01	-	IS:3025 (P-29):1986 RA 2019
15	Boron (as B), mg/l, Max	<0.1	<0.1	<0.1	<0.1	-	IS:3025 (Part-57)2021
16	Iron (as Fe),mg/l, Max	<0.005	<0.005	<0.005	<0.005	50	IS:3025(P-2) 2019
17	Percent of Sodium (%)	38	33	20.00	40.00	-	IS 11624 .2009
18	Residual Sodium Carbonate (meq/l)	<0.05	<0.05	<0.05	<0.05	-	IS:2488 (P-5) 1976
19	Total Coliform, MPN/100ml	110	180	210	300	5000	IS:1622:1981

"END OF REPORT"


 BINUMANI
 T.M. - Microbiology
 Govt. Analyst / Authorised Signatory


 ARSHIYA KOUSAR
 Dy. T.M. - Chemical
 Govt. Analyst / Authorised Signatory

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
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TEST REPORT

Table No. 16

Stack Monitoring Report

Report No. 019424103

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	RAMGAD MANGANESE & IRON ORE MINE (ML NO. 2679)
Location :	Mining Lease No. 2679
Stack ID & Capacity :	DG Set 35 KVA Ramgad-KK1 Mines
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection :	14.10.2024
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	15.10.2024
Lab Code :	N/24/10/3-0194
Issue date :	02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature ($^{\circ}\text{C}$)	30
3	Stack Temperature ($^{\circ}\text{C}$)	115
4	Velocity (m/s)	8.06
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm^3/hr)	280
7	Sample Condition When Received	Satisfactory
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
9	Serial No. of the Equipment	338 DTH 14
10	Calibration done on and due on	Done on 19.11.2022 and Due on 18.11.2024
11	Sampling and Analysis Method	IS 11255 & flue gas analyser

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.034	<0.2
2	CO	g/Kw-hr	0.080	<3.5
3	Nox +HC	g/Kw-hr	0.15	<4.0

INFERENCE

as per KSPCB

Report Status - The measured values for the above parameters for those standards have been specified were observed to be within the said standards

Arshiya Kousar
ARSHIYA KOUSAR
Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.

Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in



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TEST REPORT

Table No. 17

Stack Monitoring Report

Report No. 019524103

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	RAMGAD MANGANESE & IRON ORE MINE (ML NO. 2679)
Location :	Mining Lease No. 2679
Stack ID & Capacity :	DG Set 20 KVA Ramgad Mines
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection :	14.10.2024
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	15.10.2024
Lab Code :	N/24/10/3-0195
Issue date :	02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	30
3	Stack Temperature (°C)	130
4	Velocity (m/s)	7.68
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	108
7	Sample Condition When Received	Satisfactory
8	Model of the Equipment used for Monitoring	Vayubodhan Stack Sampler VSS1
9	Serial No. of the Equipment	338 DTH 14
10	Calibration done on and due on	Done on 19.11.2022 and Due on 18.11.2024
11	Sampling and Analysis Method	IS 11255 & flue gas analyser

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	Particulate Matter	g/Kw-hr	0.080	<0.2
2	CO	g/Kw-hr	0.040	<3.5
3	Nox +HC	g/Kw-hr	0.113	<4.0

INFERENCE

as per KSPCB

Report Status - The measured values for the above parameters for those standards have been specified were observed to be within the said standards

Arshiya Kousar
ARSHIYA KOUSAR
Dy. T.M. - Chemical

Govt. Analyst / Authorised Signatory

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.

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