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/2024-25/2678/1040

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. 2678.

Ref: 1. Environmental Clearance F.No. IA-J-11015/45/2021-IA-II(M) dated 25 April 2023.
2. Consent for Operation No. AW-345054 dated 18 September 2024.

With reference to the letter 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. 2678 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

The Sandur Manganese & Iron Ores Ltd.

08/11/2024

Encl: Monitoring Reports

ENVIRONMENTAL MONITORING REPORT

October, 2024

Project : Mining Lease No. 2678
Deogiri Manganese & Iron Ore Mine,
Kammathuru Iron Ore Mine,
Subrayanahalli Manganese & Iron Ore Mine,
Sandur Taluk, Ballari Dist, Karnataka.

Lessee

The Sandur Manganese & Iron Ores Limited
Sandur,

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 to 13
3	Dust Fall Measurement	14
4	Ambient Noise Monitoring Report	15
5	STP Water test Report	16 & 17
6	Surface Water Test Report	18 & 19
7	Ground Water Test Report	20 & 21
8	Soil Test Report	22 & 23
9	Stack Monitoring Report	24 & 32

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A1, Mine Pit (SK) / (CBG)

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/24/10/2-0029	9	11	48	27	0.27
05.10.2024	N/24/10/2-0104	7	10	40	25	0.23
07.10.2024	N/24/10/2-0179	6	13	40	22	0.22
08.10.2024	N/24/10/3-0001	10	12	35	18	0.27
18.10.2024	N/24/10/4-0163	7	10	48	24	0.25
19.10.2024	N/24/10/4-0228	9	9	44	23	0.34
21.10.2024	N/24/10/5-0002	11	12	54	28	0.28
22.10.2024	N/24/10/5-0052	9	11	48	22	0.22
28.10.2024	N/24/11/1-0002	11	14	50	27	0.28
29.10.2024	N/24/11/1-0042	10	11	53	29	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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Station at & Code : A2, Kammathuru (within 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/24/10/2-0030	7	11	53	27	0.21
05.10.2024	N/24/10/2-0105	12	9	49	27	0.36
07.10.2024	N/24/10/2-0180	9	11	38	19	0.21
08.10.2024	N/24/10/3-0002	8	9	44	20	0.25
18.10.2024	N/24/10/4-0164	10	11	48	22	0.33
19.10.2024	N/24/10/4-0229	8	12	55	29	0.35
21.10.2024	N/24/10/5-0003	7	11	50	24	0.42
22.10.2024	N/24/10/5-0053	6	9	47	25	0.34
28.10.2024	N/24/11/1-0003	9	11	41	24	0.28
29.10.2024	N/24/11/1-0043	10	12	53	27	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

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Station at & Code : A3, Deogiri (within 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/24/10/2-0031	9	10	48	25	0.28
05.10.2024	N/24/10/2-0106	6	9	40	21	0.20
07.10.2024	N/24/10/2-0181	12	14	30	19	0.29
08.10.2024	N/24/10/3-0003	7	10	50	26	0.25
18.10.2024	N/24/10/4-0165	8	13	45	25	0.35
19.10.2024	N/24/10/4-0230	7	9	39	18	0.38
21.10.2024	N/24/10/5-0004	10	12	45	27	0.40
22.10.2024	N/24/10/5-0054	9	12	49	25	0.42
28.10.2024	N/24/11/1-0004	9	10	50	27	0.26
29.10.2024	N/24/11/1-0044	7	11	42	21	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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Station at & Code : A4, SBH Plot (Mine Boundary)
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/24/10/2-0032	6	9	45	26	0.34
05.10.2024	N/24/10/2-0107	7	10	32	16	0.36
07.10.2024	N/24/10/2-0182	11	12	53	26	0.22
08.10.2024	N/24/10/3-0004	10	10	40	22	0.36
18.10.2024	N/24/10/4-0166	10	12	53	27	0.25
19.10.2024	N/24/10/4-0231	11	10	54	28	0.42
21.10.2024	N/24/10/5-0005	12	14	41	22	0.22
22.10.2024	N/24/10/5-0055	7	9	54	27	0.28
28.10.2024	N/24/11/1-0005	10	12	42	22	0.35
29.10.2024	N/24/11/1-0045	9	11	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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Station at & Code : A5, Subbarayanahalli (within 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/24/10/2-0033	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

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Station at & Code : A6, Appayyanahalli (Narayanpura)
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/24/10/2-0034	12	13	53	25	0.41
05.10.2024	N/24/10/2-0109	7	12	48	24	0.35
07.10.2024	N/24/10/2-0184	7	10	38	19	0.20
08.10.2024	N/24/10/3-0006	8	10	43	23	0.22
18.10.2024	N/24/10/4-0168	9	12	48	27	0.25
19.10.2024	N/24/10/4-0233	8	11	54	29	0.34
21.10.2024	N/24/10/5-0007	7	10	50	26	0.29
22.10.2024	N/24/10/5-0057	11	12	45	22	0.25
28.10.2024	N/24/11/1-0007	9	7	50	27	0.22
29.10.2024	N/24/11/1-0047	11	11	53	25	0.42
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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Station at & Code : A7, Vitalanagar (Navalatti)
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/24/10/2-0035	9	12	47	25	0.28
05.10.2024	N/24/10/2-0110	8	12	49	26	0.22
07.10.2024	N/24/10/2-0185	9	11	44	25	0.22
08.10.2024	N/24/10/3-0007	10	13	45	26	0.36
18.10.2024	N/24/10/4-0169	7	12	38	19	0.45
19.10.2024	N/24/10/4-0234	11	14	55	29	0.28
21.10.2024	N/24/10/5-0008	9	12	51	28	0.41
22.10.2024	N/24/10/5-0058	10	14	40	30	0.37
28.10.2024	N/24/11/1-0008	9	11	50	28	0.33
29.10.2024	N/24/11/1-0048	9	10	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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Station at & Code : A8, Swamihalli
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/24/10/2-0036	6	13	45	22	0.35
05.10.2024	N/24/10/2-0111	7	10	35	19	0.28
07.10.2024	N/24/10/2-0186	9	12	38	19	0.25
08.10.2024	N/24/10/3-0008	10	12	45	26	0.31
18.10.2024	N/24/10/4-0170	7	10	40	22	0.24
19.10.2024	N/24/10/4-0235	9	11	43	24	0.26
21.10.2024	N/24/10/5-0009	9	12	35	18	0.21
22.10.2024	N/24/10/5-0059	10	14	38	22	0.25
28.10.2024	N/24/11/1-0009	9	10	39	17	0.22
29.10.2024	N/24/11/1-0049	10	11	48	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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Station at & Code : A9, 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

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

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. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Station at & Code : A10, Tonasigeri
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/24/10/2-0038	9	12	44	22	0.22
05.10.2024	N/24/10/2-0113	11	12	54	30	0.38
07.10.2024	N/24/10/2-0178	10	12	53	28	0.22
08.10.2024	N/24/10/3-0010	10	11	45	22	0.2
18.10.2024	N/24/10/4-0162	7	10	43	20	0.25
19.10.2024	N/24/10/4-0227	10	13	36	18	0.20
21.10.2024	N/24/10/5-0001	11	13	47	26	0.26
22.10.2024	N/24/10/5-0051	10	10	54	28	0.24
28.10.2024	N/24/11/1-0001	12	14	50	29	0.41
29.10.2024	N/24/11/1-0041	9	12	46	24	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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 11

Fugitive Emission

Name of the Client	:	The Sandur Manganese & Iron Ores Limited
Name of the Project	:	Deogiri Manganese & Iron Ore Mine (ML NO. 2678)
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 (µg/m^3)
FA1, Mine Face / Benches	18.10.2024	N/24/10/4-0172	225
FA2, Haulage Road / Service Road	18.10.2024	N/24/10/4-0173	268
FA3, Crushing & Screening Plant	18.10.2024	N/24/10/4-0174	272
FA4, Mineral Staock Yard / Loading	19.10.2024	N/24/10/4-0237	357
FA5, Active Waste Dump	19.10.2024	N/24/10/4-0238	466

Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)

	Particulate mater (µg/m^3)
Permissible limits for Fugitive Emissions	**600 µg/m^3**

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 12

Fugitive Emission

Name of the Client	:	**The Sandur Manganese & Iron Ores Limited**
Name of the Project	:	**Kammathuru Iron Ore (KTIO) (ML No. 2678)**
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 (µg/m^3)**
FA1, Mine Face / Benches	04.10.2024	N/24/10/2-0039	285
FA2, Haulage Road / Service Road	04.10.2024	N/24/10/2-0040	322
FA3, Crushing & Screening Plant	04.10.2024	N/24/10/2-0041	425
FA4, Mineral Staock Yard / Loading	05.10.2024	N/24/10/2-0114	298
FA5, Active Waste Dump	05.10.2024	N/24/10/2-0115	488

Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)

	Particulate mater (µg/m^3)
Permissible limits for Fugitive Emissions	**600 µg/m^3**

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 13

Fugitive Emission

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Subrayanahalli Manganese & Iron Ore Mine (ML NO. 2678)
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 ($\mu g/m^3$)
FA1, Mine Face / Benches	07.10.2024	N/24/10/2-0188	238
FA2, Haulage Road / Service Road	07.10.2024	N/24/10/2-0189	378
FA3, Crushing & Screening Plant	07.10.2024	N/24/10/2-0190	457
FA4, Mineral Staock Yard / Loading	08.10.2024	N/24/10/3-0011	388
FA5, Active Waste Dump	08.10.2024	N/24/10/3-0012	328

Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)

	Particulate mater ($\mu g/m^3$)
Permissible limits for Fugitive Emissions	**600 $\mu g/m^3$**

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 14

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. 2678
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	Deogiri mines office	0.022	g/m^2 month	IS 5182 (Part 01) : 2006
DF2	Kammathuru (Near School)	0.018	g/m^2 month	IS 5182 (Part 01) : 2006
DF3	Appayyanahalli	0.090	g/m^2 month	IS 5182 (Part 01) : 2006
DF4	Subbarayanahalli (Near Hospital)	0.013	g/m^2 month	IS 5182 (Part 01) : 2006
DF5	Yeswanthanagar (Near Railway Track)	0.017	g/m^2 month	IS 5182 (Part 01) : 2006

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 15

AMBIENT NOISE LEVEL DATA

Report No : ELMES072410

Client	: The Sandur Manganese & Iron Ores Limited
Project	: Mining Lease No. 2678
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of monitoring	: 07.10.2024
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	Mine Pit (SK/CBG)	41.0	50.4	58.0	34.0	42.4	48.0
N2	Kammathuru ML Area	40.0	51.3	57.6	35.3	44.2	49.0
N3	Deogiri ML Area	37.0	50.0	56.0	34.0	42.2	46.3
N4	SBS Plot (Mine Boundary)	42.0	50.8	56.8	35.0	43.5	48.2
N5	SB Halli ML Area	36.0	47.5	54.2	34.0	41.7	45.1
N6	Mine area	40.0	51.8	56.0	33.3	41.1	45.0
	Bufferzone						
N7	Appayanahalli (Narayanapura)	37.0	48.7	54.0	34.0	38.9	43.2
N8	Vitthalanagar (Navalatti)	35.0	50.7	57.0	34.0	43.1	46.8
N9	Swamihalli	36.0	44.4	51.0	33.6	41.2	44.2
N10	Yeshwanthnagar	35.0	48.5	54.7	34.0	40.3	44.7
N11	Tonasingeri	36.0	49.9	53.8	33.6	41.1	43.0
N12	Kumaraswamy Temple	36.3	47.1	53.9	34.3	39.8	44.2

Permissible Limits of Ambient Noise Levels as per CPCB Guidelines

	Leq. Limit dB(A) Day	Night
Industrial areas	75	70
Commercial area	65	55
Residential area	55	45

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 16
Report No : N021424102

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2678
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Particulars of sample collected	: STP1, Inlet Water sample from 100 KLD STP, Deogiri
Date of sample collection	: 08.10.2024
Lab Code	: N/24/10/2-0214
Issue Date	: 29.10.2024

Ref: G S R 1265 (e) and Schedule VI (Rule 3A of EP rule 1986)

Sl. No.	Sample Code / Parameters	STP1 / Results	Method of Testing
1	pH	7.32	IS 3025 (P-11)2017
2	Biochemical Oxygen Demand BOD_3 27^0 C, mg/l	46	IS 3025 (P-44) 1993 RA 2019
3	Total Suspended Solids, at 105^0C, mg/l	180	IS 3025 (P-16)1984 RA 2017
4	Fecal coliform, MPN/100ml	5	APHA-23rd Edition

BINUMANI
T.M. - Microbiology

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 17
Report No : N021524102

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 2678
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Particulars of sample collected	: STP2, Outlet Water sample from 100 KLD STP, Deogiri
Date of sample collection	: 08.10.2024
Lab Code	: N/24/10/2-0215
Issue Date	: 29.10.2024

Ref : Discharge Standards for Treated Sewage Utilized for Landscape/Irrigation/Seccondary Purposes

Sl. No.	Parameters	units	Results	Sewage Effluent Discharge Standards	Method of Testing
1	pH	-	7.83	6.5 - 9.0	IS 3025 (P-11)2017
2	Biochemical Oxygen Demand BOD_3 27^0 C	mg/l	7.92	<10	IS 3025 (P-44) 1993 RA 2019
3	Chemical Oxygen Demand (COD)	mg/l	40	<50	IS 3025 (P-58) 2006 RA 2017
4	Total Suspended Solids, at 105^0C	mg/l	16	<20	IS 3025 (P-16)1984 RA 2017
5	Ammonium (H4-N)	mg/l	1.8	<5	IS:3025 (P-34) 2023
6	Total Nitrogen (N-Total)	mg/l	5.4	<10	IS 3025 (Part-34)
7	Fecal coliform	MPN/100ml	3	<100	IS:15185 :2016 RA 2021

BINUMANI
T.M. - Microbiology

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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 18

Name of the Client : The Sandur Manganese & Iron Ores Limited
Name of the Project : Mining Lease No. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Particulars of sample collected : SW1 - Durgammakolla spring water, SW2 - JLK spring water
SW3 - Katrasinghkolla spring water
Date of sample collection : 08.10.2024
Date of sample receipt : 09.10.2024
Issue Date : 29.10.2024
Ref:IS : 2296, 1982 Class C Norms (Stream Water Standards)

Sl.No.	Lab Code / Parameters	N/24/10/2-0204	N/24/10/2-0205	N/24/10/2-0206	Limits For Stream Water Standards	Method of Testing
		Results				
		SW1	SW2	SW3		
1	pH	7.82	8.47	7.65	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units), Max	1	1	5	300	IS:3025(Part-4)2021
3	Odour	Agreeable	Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l), Max	300	242	136	1500	IS:3025(Part-16)2023
5	Total Suspended Solids, mg/l	32	12	52	-	IS 3025 (P-17) 2022
6	Dissolved Oxygen (as O_2), mg/l, Max	5.5	5.6	5.3	Min 4	IS:3025(Part-38)1989RA 2019
7	Biochemical Oxygen Demand (as O_2), mg/l	<3.0	<3.0	<3.0	3	IS:3025(P-44) 2014
8	Oil & Greease, mg/l	<1.0	<1.0	<1.0	0.1	IS:3025(Part 39)2021
9	Total Hardness (as $CaCO_3$),mg/l,Max	218	140	62	-	IS:3025 (P-21):2009 RA 2019
10	Sulphates as SO_4 (mg/l), Max	42.3	36	9.3	400	IS:3025(P-24)Sec 1 2022
11	Phosphates (as P), mg/l	<0.05	<0.05	<0.05	-	IS 3025 (P-31) Sec 1 2022
12	Chloride (as Cl),mg/l, Max	38	70	60	600	IS:3025(Part-32) ;1988RA2019
13	Fluoride (as F),mg/l, Max	0.6	0.4	0.35	1.5	APHA 23rd Edition 4500F
14	Sulphide (as H_2S) , mg/l, Max	<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	-	IS:3025 (Part-57)2021
16	Iron (as Fe),mg/l, Max	0.019	0.04	0.09	50	IS:3025(P-2) 2019
17	Percent of Sodium (%)	20	26	36	-	IS 11624 .2009
18	Residual Sodium Carbonate (meq/l)	<0.5	<0.5	<0.5	-	IS:2488 (P-5) 1976
19	Total Coliform, MPN/100ml	112	140	120	5000	IS:1622:1981

"'END OF REPORT"

BINUMANI
T.M. - Microbiology

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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No.19

Name of the Client : The Sandur Manganese & Iron Ores Limited
Name of the Project : Mining Lease No. 2678
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)
Particulars of sample collected : SW4 - Hari Shankar Spring Water, SW5 - Narihalla Dam water
Date of sample collection : 08.10.2024
Date of sample receipt : 09.10.2024
Issue Date : 29.10.2024
Ref:IS : 2296, 1982 Class C Norms (Stream Water Standards)

Sl.No.	Parameters	Lab Code	N/24/10/2-0207	N/24/10/2-0208	Limits For Stream Water Standards	Method of Testing
			Results			
			SW4	SW5		
1	pH		8.40	8.05	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units), Max		5.0	5.00	300	IS:3025(Part-4)2021
3	Odour		Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l), Max		190.0	346.0	1500	IS:3025(Part-16)2023
5	Total Suspended Solids, mg/l		14.6	50	-	IS 3025 (P-17) 2022
6	Dissolved Oxygen (as O_2), mg/l, Max		5.50	5.20	Min 4	IS:3025(Part-38)1989RA 2019
7	Biochemical Oxygen Demand (as O_2), mg/l		<3	<3	3	IS:3025(P-44) 2014
8	Oil & Greease, mg/l		<0.1	<0.1	0.1	IS:3025(Part 39)2021
9	Total Hardness (as $CaCO_3$),mg/l,Max		80	186	-	IS:3025 (P-21):2009 RA 2019
10	Sulphates as SO_4 (mg/l), Max		20	40.2	400	IS:3025(P-24)Sec 1 2022
11	Phosphates (as P), mg/l		<0.05	<0.05	-	IS 3025 (P-31) Sec 1 2022
12	Chloride (as Cl),mg/l, Max		56	105	600	IS:3025(Part-32) ;1988RA2019
13	Fluoride (as F),mg/l, Max		0.5	0.8	1.5	APHA 23rd Edition 4500F
14	Sulphide (as H_2S) , mg/l, Max		<0.01	<0.01	-	IS:3025 (P-29):1986 RA 2019
15	Boron (as B), mg/l, Max		<0.1	<0.1	-	IS:3025 (Part-57)2021
16	Iron (as Fe),mg/l, Max		<0.05	<0.05	50	IS:3025(P-2) 2019
17	Percent of Sodium (%)		30.00	26.00	-	IS 11624 .2009
18	Residual Sodium Carbonate (meq/l)		<0.05	<0.05	-	IS:2488 (P-5) 1976
19	Total Coliform, MPN/100ml		45	80	5000	IS:1622:1981

"'END OF REPORT"

BINUMANI
T.M. - Microbiology

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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 20

Name of the Client : **The Sandur Manganese & Iron Ores Limited**
Name of the Project : **Mining Lease No. 2678**
Sample Collected by : **Environmental Laboratory (Unit of Mineral Engineering Services)**
Particulars of sample collected : **GW1 - Deogiri Mine Office Bore water, GW2 - Kammaturu Bore water, GW3 - Appayyanahalli (Narayanpura) Bore water**
Date of sample collection : **08.10.2024**
Issue Date : **29.10.2024**

Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)

Sl. No.	Lab Code / Sample Code / Parameters	N/24/10/2-0209 GW1	N/24/10/2-0210 GW2	N/24/10/2-0211 GW3	Desirable Limts	Permissible Limts	Method of Testing
		Results					
1	Colour (Hazen Units)	1	1	<1	5	15	IS:3025 (P-4) 2021
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P-5) 2018
3	pH Value	8.20	7.88	8.11	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11) 2022
4	Turbidity,NTU, Max	1.8	0.5	2.5	1	5	IS:3025 (P-10)1984 RA 2017
5	Electrical Conductvity (µmhos/cm)	290.0	380.0	1500.0	--	--	IS 3025 (P-14)
6	Total Dissolved Solids,mg/l, Max	156.0	220.0	850.0	500	2000	IS:3025 (P-16)1984 RA2017
7	Aluminium (as Al), Max	<0.005	<0.005	<0.005	0.03	0.2	IS:3025 (P-2)2019
8	Boron (as B), mg/l, Max	<0.1	<0.1	<0.1	0.5	2.4	IS:3025 (Part-57)2021
9	Calcium (as Ca),mg/l, Max	25.60	22.00	80.10	75	200	IS:3025 (P-40)1991 RA 2019
10	Copper (as Cu),mg/l, Max	<0.005	<0.005	<0.005	0.05	1.5	IS:3025 (P-2)2019
11	Chloride as Cl (mg/l),mg/l, Max	26.0	44.0	200.0	250	1000	IS:3025 (P-32) 1988 RA 2019
12	Fluoride (as F),mg/l, Max	0.32	0.85	0.80	1	1.5	IS:3025 (P-60) 2008 RA 2019
13	Iron (as Fe),mg/l, Max	<0.005	<0.005	<0.005	1.0	1.0	IS:3025 (Part-2) 2019
14	Magnesium (as Mg)mg/l, Max	8.75	21.23	60.70	30	100	IS:3025 (P-46)1994 RA 2019
15	Manganese (as Mn),mg/l, Max	<0.001	<0.001	<0.001	0.1	0.3	IS:3025 (P-2) 2019
16	Nitrates (as NO_3),mg/l, Max	5.80	6.10	28.70	45	45	IS:3025 (P-34)Sec 1 2023
17	Selenium (as Se),mg/l	<0.005	<0.005	<0.005	0.01	0.01	IS:3025(P-2) 2019
18	Sulphates (as SO_4),mg/l, Max	20.0	26.0	77.0	200	400	IS:3025 (P-24) Sec 1 2022
19	Alkalinity (as $CaCO_3$) mg/l, Max	100.00	110.0	450.0	200	600	IS:3025 (P-23):1986 RA 2019
20	Total Hardness (as $CaCO_3$),mg/l,Max	100.0	130.0	450.0	200	600	IS:3025 (P-21):2009 RA 2019
21	Zinc (as Zn),mg/l, Max	<0.005	<0.005	<0.005	5	15	IS:3025 (P-2) 2019
22	Sodium, (as Na), mg/l, Max	8	60	46	-	-	IS:3025 (Part-45) 1993 RA2019
23	Potassium, (as K), mg/l, Max	2	10	6	-	-	IS:3025 (Part-45)
24	Cadmium (as Cd),mg/l, Max	<0.001	<0.001	<0.001	0.003	0.003	IS:3025 (P-2) 2019
25	Cyanide (as CN),mg/l, Max	<0.01	<0.01	<0.01	0.05	0.05	IS:3025 (P-27)Sec 1 2021
26	Lead (as Pb),mg/l, Max	<0.005	<0.005	<0.005	0.01	0.01	IS:3025 (P-2) 2019
27	Mercury (as Hg),mg/l, Max	<0.0005	<0.0005	<0.0005	0.001	0.001	USPEA 200.7 Rev 4.4
28	Arsenic (as As),mg/l, Max	<0.002	<0.002	<0.002	0.01	0.01	IS:3025 (P-2) 2019
29	Total Chromium (as Cr),mg/l, Max	<0.001	<0.001	<0.001	0.05	0.05	IS:3025 (P-52) 2014
30	Escherichia coli/100ml	Not Detected	Not Detected	Not Detected	Shall not be detectable in any 100ml Sample		IS:15185:2016 RA 2021
31	Total Coliform /100ml)	Not Detected	Not Detected	Not Detected			IS:15185:2016 RA 2021

"END OF REPORT"

BINUMANI
T.M. - Microbiology

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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 21

Name of the Client : **The Sandur Manganese & Iron Ores Limited**
Name of the Project : **Mining Lease No. 2678**
Sample Collected by : **Environmental Laboratory (Unit of Mineral Engineering Services)**
Particulars of sample collected : **GW4 - SB Halli Bore water (near hospital),**
GW5 - Yeshwanthnagar Bore water (near railway track)
Date of sample collection : **08.10.2024**
Issue Date : **29.10.2024**
Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)

Sl. No.	Lab Code / Sample Code / Parameters	N/24/10/2-0212 GW4 Results	N/24/10/2-0213 GW5 Results	Desirable Limts	Permissible Limts	Method of Testing
1	Colour (Hazen Units)	<1	1	5	15	IS:3025 (P-4) 2021
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P-5) 2018
3	pH Value	7.60	7.25	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11) 2022
4	Turbidity,NTU, Max	1.5	1.1	1	5	IS:3025 (P-10)1984 RA 2017
5	Electrical Conductvity (µmhos/cm)	2100.0	2400.0	--	--	IS 3025 (P-14)
6	Total Dissolved Solids,mg/l, Max	1220.0	1400.0	500	2000	IS:3025 (P-16)1984 RA2017
7	Aluminium (as Al), Max	<0.005	<0.005	0.03	0.2	IS:3025 (P-2)2019
8	Boron (as B), mg/l, Max	<0.1	<0.1	0.5	2.4	IS:3025 (Part-57)2021
9	Calcium (as Ca),mg/l, Max	128.20	140.20	75	200	IS:3025 (P-40)1991 RA 2019
10	Copper (as Cu),mg/l, Max	<0.005	<0.005	0.05	1.5	IS:3025 (P-2)2019
11	Chloride as Cl (mg/l),mg/l, Max	300.00	400.00	250	1000	IS:3025 (P-32) 1988 RA 2019
12	Fluoride (as F),mg/l, Max	0.48	0.62	1	1.5	IS:3025 (P-60) 2008 RA 2019
13	Iron (as Fe),mg/l, Max	<0.005	<0.005	1.0	1.0	IS:3025 (Part-2) 2019
14	Magnesium (as Mg)mg/l, Max	116.60	51.00	30	100	IS:3025 (P-46)1994 RA 2019
15	Manganese (as Mn),mg/l, Max	<0.001	<0.001	0.1	0.3	IS:3025 (P-2) 2019
16	Nitrates (as NO_3),mg/l, Max	20.30	21.50	45	45	IS:3025 (P-34)Sec 1 2023
17	Selenium (as Se),mg/l	<0.005	<0.005	0.01	0.01	IS:3025(P-2) 2019
18	Sulphates (as SO_4),mg/l, Max	140.00	60.80	200	400	IS:3025 (P-24) Sec 1 2022
19	Alkalinity (as $CaCO_3$) mg/l, Max	560.0	260.0	200	600	IS:3025 (P-23):1986 RA 2019
20	Total Hardness (as $CaCO_3$),mg/l,Max	800.0	390.0	200	600	IS:3025 (P-21):2009 RA 2019
21	Zinc (as Zn),mg/l, Max	<0.005	<0.005	5	15	IS:3025 (P-2) 2019
22	Sodium, (as Na), mg/l, Max	120	80	--	--	IS:3025 (Part-45) 1993 RA2019
23	Potassium, (as K), mg/l, Max	8	6	--	--	IS:3025 (Part-45)
24	Cadmium (as Cd),mg/l, Max	<0.001	<0.001	0.003	0.003	IS:3025 (P-2) 2019
25	Cyanide (as CN),mg/l, Max	<0.01	<0.01	0.05	0.05	IS:3025 (P-27)Sec 1 2021
26	Lead (as Pb),mg/l, Max	<0.005	<0.005	0.01	0.01	IS:3025 (P-2) 2019
27	Mercury (as Hg),mg/l, Max	<0.0005	<0.0005	0.001	0.001	USPEA 200.7 Rev 4.4
28	Arsenic (as As),mg/l, Max	<0.002	<0.002	0.01	0.01	IS:3025 (P-2) 2019
29	Total Chromium (as Cr),mg/l, Max	<0.001	<0.001	0.05	0.05	IS:3025 (P-52) 2014
30	Escherichia coli/100ml	Not Detected	Not Detected	Shall not be detectable in any 100ml Sample		IS:15185:2016 RA 2021
31	Total Coliform /100ml)	Not Detected	Not Detected			IS:15185:2016 RA 2021

"END OF REPORT"

BINUMANI
T.M. - Microbiology

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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 22

Name of the Client : **The Sandur Manganese & Iron Ores Limited**
Name of the Project : **Mining Lease No. 2678**
Particulars of sample : **Soil Samples**
Sample Collected by : **Environmental Laboratory (Unit of Mineral Engineering Services)**
Date of sample collection : **08.10.2024**
Issue Date : **02.11.2024**

	Lab Code		N/24/10/2-0216	N/24/10/2-0217	N/24/10/2-0218	N/24/10/2-0219	N/24/10/2-0220
SL. No.	Sample Code		S1	S2	S3	S4	S5
	PARAMETERS	Unit	Results				
PHYSICAL PROPERTIES							
1	Colour	--	Red Soil	Red Soil	Red Soil	Red Soil	Red Soil
2	Textural class	--	Clay Loam	Sandy Loam	Clay Loam	Clay Loam	Clay Loam
3	Size Distribution						
	Sand	%	30.22	34.14	32.22	30.23	36.00
	Clay	%	24.52	28.89	30.25	26.21	25.86
	Silt	%	45.26	36.97	37.53	43.56	38.14
4	Moisture Content	%	7.11	6.75	6.35	6.31	7.23
5	Bulk Density	gm/cc	1.51	1.72	1.62	1.75	1.55
6	Water holding capacity	%	30.28	28.38	22.12	26.66	20.56
7	pH	--	6.73	6.33	7.21	7.4	6.32
8	EC	m.mohs/cm	0.188	0.268	0.19	0.24	0.172
Chemcial Properties							
9	Organic Carbon	%	0.63	0.31	0.17	1.83	2.53
10	Nitrogen as N	Kg/Ha	130	235	118	128	180
11	Phosphorous as P	Kg/Ha	6.41	8.65	7..20	7.53	7.32
12	Potassium as K_2O	Kg/Ha	180	130	120	124	140
13	Sodium as Na	mg/kg	32	28	60	30	36
14	Chloride as Cl	mg/kg	130	110	159	136	230
15	Sulphate as SO_4	mg/kg	31	33	35	34	36

Sample Locations :

S1 - Top soil (Kammathuru)
S2 - Top soil (Deogiri)
S3 - Top soil (SB Halli)
S4 - Active Dump 1
S5 - Active Dump 2

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

Note : This report is subject to the terms and conditions mentioned overleaf.

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 23

Name of the Client : **The Sandur Manganese & Iron Ores Limited**
Name of the Project : **Mining Lease No. 2678**
Particulars of sample : **Soil Samples**
Sample Collected by : **Environmental Laboratory (Unit of Mineral Engineering Services)**
Date of sample collection : **08.10.2024**
Issue Date : **02.11.2024**

	Lab Code		N/24/10/2-0221	N/24/10/2-0222	N/24/10/2-0223	N/24/10/2-0224	N/24/10/2-0225
SL. No.	**Sample Code**		**S6**	**S7**	**S8**	**S9**	**S10**
	PARAMETERS	**Unit**	**Results**				
PHYSICAL PROPERTIES							
1	Colour	--	Red Soil	Red Soil	Red Soil	Red Soil	Red soil
2	Textural class	--	Clay Loam	Clay Loam	Slity Clay	Slity Clay	Clay Loam
3	Size Distribution						
	Sand	%	32.65	32.00	39.21	38.21	38.98
	Clay	%	39.03	39.89	30.58	25.79	30.48
	Silt	%	28.32	28.11	30.21	36.00	30.54
4	Moisture Content	%	7.36	6.78	7.41	6.23	6.11
5	Bulk Density	gm/cc	1.85	2.33	1.63	1.8	7.85
6	Water holding capacity	%	35.85	30.21	31.24	34.25	40
7	pH	--	7.48	6.88	7.21	7.22	7.55
8	EC	m.mohs/cm	0.422	0.481	0.41	0.365	0.512
Chemcial Properties							
9	Organic Carbon	%	0.63	0.52	0.50	0.61	0.40
10	Nitrogen as N	Kg/Ha	130	126	133	162	124
11	Phosphorous as P	Kg/Ha	32	44	48	50	41
12	Potassium as K_2O	Kg/Ha	136	160	148	144	134
13	Sodium as Na	mg/kg	50	42	40	53	32
14	Chloride as Cl	mg/kg	30	30	30	44	30
15	Sulphate as SO_4	mg/kg	32	34	31	40	46

Sample Locations :

S6 - Appayyanahalli agriculture lan
S7 - Vitthalanagar agriculture land
S8 - Swamihalli agriculture land
S9 -Tonasigere agriculture land
S10 - Yeshwanthnagar agriculture land

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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 24

Stack Monitoring Report

Report No.N019724102

Name of the Client : The Sandur Manganese & Iron Ores Limited
Name of the Mine : Subrayanahalli Manganese & Iron Ore Mine (ML NO. 2678)

Location	: KVH Iron Ore Mines
Stack ID & Capcity	: DG 1010 KVA (808 KW)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection	: 07.10.2024
Particulars of Sample Collected	: Emissions from stack collected through stack sample VSS1
Date of Sample Receipt	: 09.10.2024
Lab Code	: N/24/10/2-0197
Issue date	: 02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	171
4	Velocity (m/s)	15.17
5	Stack diameter (M)	0.30
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	3471
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	NOx (as NO_2) (as 15% O_2), dry basis	ppmv	29.10	360
2	NMHC (as C) (at 15 % O_2)	mg/Nm3	33.21	100
3	PM (as C) (at 15 % O_2)	mg/Nm3	31.00	75
4	CO (at 15 % O2)	(mg/Nm3	51.00	150

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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 25

Stack Monitoring Report

Report No.N019824102

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Deogiri Manganese & Iron Ore Mine (ML NO. 2678)
Location	: Katasinkolla
Stack ID & Capcity	: DG Set 62.5 KVA
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection	: 07.10.2024
Particulars of Sample Collected	: Emissions from stack collected through stack sample VSS1
Date of Sample Receipt	: 09.10.2024
Lab Code	: N/24/10/2-0198
Issue date	: 02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	135
4	Velocity (m/s)	6.73
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	302
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	0.11	<0.2
2	CO	g/Kw-hr	0.05	<3.5
3	Nox +HC	g/Kw-hr	0.49	<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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 26

Stack Monitoring Report

Report No.N019924102

Name of the Client : The Sandur Manganese & Iron Ores Limited	
Name of the Mine : Subrayanahallul Manganese & Iron Ore Mine (ML NO. 2678)	
Location	: KVH Iron Ore Mine
Stack ID & Capcity	: DG Set 6.0 KVA Doosan Light Source
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection	: 07.10.2024
Particulars of Sample Collected	: Emissions from stack collected through stack sample VSS1
Date of Sample Receipt	: 09.10.2024
Lab Code	: N/24/10/2-0199
Issue date	: 02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	133
4	Velocity (m/s)	5.39
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	243
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	0.16	<3.5
3	Nox +HC	g/Kw-hr	0.52	<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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 27

Stack Monitoring Report

Report No.N020024102

Name of the Client :	**The Sandur Manganese & Iron Ores Limited**
Name of the Mine :	**Deogiri Manganese & Iron Ore Mine (ML NO. 2678)**
Location :	**KTION Work Shop**
Stack ID & Capcity :	**DG Set 6.0 KVA Doosan Light Source**
Sample Collected by :	**Environmental Laboratory (Unit of Mineral Engineering Services)**
Date of Collection :	**08.10.2024**
Particulars of Sample Collected :	**Emissions from stack collected through stack sample VSS1**
Date of Sample Receipt :	**09.10.2024**
Lab Code :	**N/24/10/2-0200**
Issue date :	**02.11.2024**

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	128
4	Velocity (m/s)	6.09
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	279
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	0.090	<0.2
2	CO	g/Kw-hr	0.19	<3.5
3	Nox +HC	g/Kw-hr	0.46	<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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 28

Stack Monitoring Report

Report No.N020124102

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Kammathuru Iron Ore (KTIO) (ML No. 2678)
Location	: KTIO Sub Station
Stack ID & Capcity	: DG Set 125 KVA
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection	: 08.10.2024
Particulars of Sample Collected	: Emissions from stack collected through stack sample VSS1
Date of Sample Receipt	: 09.10.2024
Lab Code	: N/24/10/2-0201
Issue date	: 02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	135
4	Velocity (m/s)	13.20
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	593
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	0.047	<0.2
2	CO	g/Kw-hr	0.06	<3.5
3	Nox +HC	g/Kw-hr	0.12	<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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No.29

Stack Monitoring Report

Report No.N020224102

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Kammathuru Iron Ore (KTIO) (ML No. 2678)
Location	: KTIO Sub Station
Stack ID & Capcity	: DG Set 82.5 KVA
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection	: 08.10.2024
Particulars of Sample Collected	: Emissions from stack collected through stack sample VSS1
Date of Sample Receipt	: 09.10.2024
Lab Code	: N/24/10/2-0202
Issue date	: 02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	113
4	Velocity (m/s)	7.97
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	379
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	0.014	<0.2
2	CO	g/Kw-hr	0.11	<3.5
3	Nox +HC	g/Kw-hr	0.16	<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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 30

Stack Monitoring Report

Report No.N020324102

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Kammathuru Iron Ore (KTIO) (ML No. 2678)
Location	: KTIO - D-09 Dump
Stack ID & Capcity	: DG Set 7.5 KVA
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection	: 08.10.2024
Particulars of Sample Collected	: Emissions from stack collected through stack sample VSS1
Date of Sample Receipt	: 09.10.2024
Lab Code	: N/24/10/2-0203
Issue date	: 02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	130
4	Velocity (m/s)	7.24
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	329
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	0.090	<0.2
2	CO	g/Kw-hr	0.18	<3.5
3	Nox +HC	g/Kw-hr	0.61	<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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 31

Stack Monitoring Report

Report No.N022524104

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Kammathuru Iron Ore (KTIO) (ML No. 2678)
Location	: KTIO - Work Shop
Stack ID & Capcity	: DG 6 KVA Doosan Light Source
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection	: 18.10.2024
Particulars of Sample Collected	: Emissions from stack collected through stack sample VSS1
Date of Sample Receipt	: N/24/10/4-0225
Issue date	: 02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	117
4	Velocity (m/s)	6.71
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	315
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	0.094	<0.2
2	CO	g/Kw-hr	0.26	<3.5
3	Nox +HC	g/Kw-hr	1.47	<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
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

Note : This report is subject to the terms and conditions mentioned overleaf.

Format No. : 10

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory
Recognised by MoEFCC(CPCB) under E(P) Act 1986 recognition valid upto 23.05.2025

TEST REPORT

Table No. 32

Stack Monitoring Report

Report No.N022624104

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Kammathuru Iron Ore (KTIO) (ML No. 2678)
Location	: KTIO - Work Shop
Stack ID & Capcity	: DG 6 KVA Doosan Light Source
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Date of Collection	: 18.10.2024
Particulars of Sample Collected	: Emissions from stack collected through stack sample VSS1
Date of Sample Receipt	: N/24/10/4-0226
Issue date	: 02.11.2024

STACK DETAILS

1	Fuel Used	Diesel
2	AmbientTemperature (^{0}C)	30
3	Stack Temperature (^{0}C)	125
4	Velocity (m/s)	7.33
5	Stack diameter (M)	0.15
6	Quanitity of flue Gas Discharged into atmosphere (Nm^3/hr)	337
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	0.110	<0.2
2	CO	g/Kw-hr	0.17	<3.5
3	Nox +HC	g/Kw-hr	1.18	<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
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

Note : This report is subject to the terms and conditions mentioned overleaf.