

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

No: SMIORE/MN/070225/2678/1462

07 February 2025

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

Dear Sir,

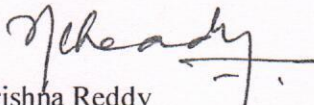
Sub: Submission of reports pertaining to monitoring environmental parameters for the month of January 2025 in respect of Mining Lease No. 2678.

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 from NABET accredited and MoEFCC empaneled laboratory M/s Mineral Engineering Services as per stipulated environmental parameters in Environmental Clearance and Consent for Operation-Expansion for the month of January 2025 in respect of Mining Lease No. 2678 of The Sandur Manganese & Iron Ores Limited.

Kindly request you to acknowledge receipt of the reports and oblige.

Thank you,
for The Sandur Manganese & Iron Ores Limited,


Krishna Reddy
Vice President - Mines

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, Mariyammanahalli - 583 222, Hosapete Taluk, Ballari District

Tel: +91 8394 244450 / 244335

ENVIRONMENTAL MONITORING REPORT

January, 2025

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,

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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. 2678 Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP) Station at & Code : A1, Mine Pit (SK) / (CBG) Duration : 24 Hrs Issue date : 03.02.2025 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)	
03.01.2025	N/25/01/02-0002	11	12	55	28	0.33
04.01.2025	N/25/01/02-0040	10	11	58	33	0.24
10.01.2025	N/25/01/03-0138	6	9	48	25	0.45
11.01.2025	N/25/01/03-0217	7	10	60	34	0.36
13.01.2025	N/25/01/03-0433	9	12	50	27	0.33
14.01.2025	N/25/01/03-0487	11	14	56	29	0.26
24.01.2025	N/25/01/05-0002	10	12	54	27	0.25
25.01.2025	N/25/01/05-0062	10	11	48	24	0.35
27.01.2025	N/25/01/5-0129	9	11	55	21	0.42
28.01.2025	N/25/01/5-0278	11	12	44	23	0.22
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

M. Sachin Raju
M.SACHIN RAJU
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.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 LLP) Station at & Code : A2, Kammathuru (within ML Area) Duration : 24 Hrs Issue date : 03.02.2025 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)	
03.01.2025	N/25/01/02-0003	9	13	56	28	0.36
04.01.2025	N/25/01/02-0041	7	10	38	22	0.28
10.01.2025	N/25/01/03-0139	9	13	57	24	0.21
11.01.2025	N/25/01/03-0218	11	18	53	26	0.26
13.01.2025	N/25/01/03-0434	10	11	48	25	0.31
14.01.2025	N/25/01/03-0488	7	12	52	18	0.42
24.01.2025	N/25/01/05-0003	9	11	42	27	0.22
25.01.2025	N/25/01/05-0063	8	10	35	16	0.48
27.01.2025	N/25/01/5-0130	9	9	60	33	0.24
28.01.2025	N/25/01/5-0279	10	9	55	31	0.36
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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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 LLP)
Station at & Code	: A3, Deogiri (within ML Area)
Duration	: 24 Hrs
Issue date	: 03.02.2025
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)	
03.01.2025	N/25/01/02-0004	11	13	43	26	0.21
04.01.2025	N/25/01/02-0042	9	10	56	33	0.42
10.01.2025	N/25/01/03-0140	7	13	51	27	0.38
11.01.2025	N/25/01/03-0219	10	10	40	25	0.27
13.01.2025	N/25/01/03-0435	7	9	45	22	0.21
14.01.2025	N/25/01/03-0489	10	14	51	28	0.20
24.01.2025	N/25/01/05-0004	8	13	54	29	0.36
25.01.2025	N/25/01/05-0064	8	10	42	21	0.25
27.01.2025	N/25/01/5-0131	9	11	57	32	0.44
28.01.2025	N/25/01/5-0280	8	10	53	28	0.36
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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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 LLP)						
Station at & Code : A4, SBH Plot (Mine Boundary)						
Duration : 24 Hrs						
Issue date : 03.02.2025						
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)	
03.01.2025	N/25/01/02-0005	11	16	29	20	0.28
04.01.2025	N/25/01/02-0043	8	10	41	23	0.29
10.01.2025	N/25/01/03-0141	12	15	50	27	0.22
11.01.2025	N/25/01/03-0220	10	13	55	28	0.31
13.01.2025	N/25/01/03-0436	8	10	58	19	0.24
14.01.2025	N/25/01/03-0490	9	12	52	20	0.22
24.01.2025	N/25/01/05-0005	10	15	42	22	0.31
25.01.2025	N/25/01/05-0065	12	14	53	26	0.36
27.01.2025	N/25/01/5-0132	11	12	54	29	0.33
28.01.2025	N/25/01/5-0281	8	11	54	27	0.35
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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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 LLP)						
Station at & Code : A5, Subbarayanahalli (within ML Area)						
Duration : 24 Hrs						
Issue date : 03.02.2025						
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)	
03.01.2025	N/25/01/02-0006	6	9	42	20	0.22
04.01.2025	N/25/01/02-0044	10	13	50	27	0.48
10.01.2025	N/25/01/03-0142	8	11	52	19	0.36
11.01.2025	N/25/01/03-0221	9	12	36	18	0.34
13.01.2025	N/25/01/03-0437	10	11	54	28	0.24
14.01.2025	N/25/01/03-0491	8	10	47	25	0.25
24.01.2025	N/25/01/05-0006	10	13	50	27	0.33
25.01.2025	N/25/01/05-0066	8	13	46	24	0.42
27.01.2025	N/25/01/5-0133	9	10	58	30	0.28
28.01.2025	N/25/01/5-0282	5	12	56	30	0.22
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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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 LLP)
Station at & Code	: A6, Appayyanahalli (Narayanpura)
Duration	: 24 Hrs
Issue date	: 03.02.2025
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)	
03.01.2025	N/25/01/02-0007	11	19	45	28	0.24
04.01.2025	N/25/01/02-0045	12	14	57	26	0.36
10.01.2025	N/25/01/03-0143	8	15	38	22	0.45
11.01.2025	N/25/01/03-0222	10	13	50	27	0.40
13.01.2025	N/25/01/03-0438	11	12	46	26	0.30
14.01.2025	N/25/01/03-0492	12	15	51	29	0.35
24.01.2025	N/25/01/05-0007	7	12	37	20	0.24
25.01.2025	N/25/01/05-0067	10	13	43	22	0.29
27.01.2025	N/25/01/5-0134	9	11	55	30	0.24
28.01.2025	N/25/01/5-0283	11	16	47	26	0.22
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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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 LLP)
Station at & Code	: A7, Vitalanagar (Navalatti)
Duration	: 24 Hrs
Issue date	: 03.02.2025
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)	
03.01.2025	N/25/01/02-0008	8	12	53	26	0.31
04.01.2025	N/25/01/02-0046	9	11	51	19	0.35
10.01.2025	N/25/01/03-0144	10	14	55	32	0.28
11.01.2025	N/25/01/03-0223	11	13	46	24	0.21
13.01.2025	N/25/01/03-0439	10	12	60	33	0.46
14.01.2025	N/25/01/03-0493	11	14	53	28	0.22
24.01.2025	N/25/01/05-0008	9	12	51	26	0.49
25.01.2025	N/25/01/05-0068	10	13	48	25	0.25
27.01.2025	N/25/01/5-0135	11	15	59	34	0.34
28.01.2025	N/25/01/5-0284	5	13	57	33	0.36
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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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 LLP)
Station at & Code	: A7, Vitalanagar (Navalatti)
Duration	: 24 Hrs
Issue date	: 03.02.2025
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)	
03.01.2025	N/25/01/02-0008	8	12	53	26	0.31
04.01.2025	N/25/01/02-0046	9	11	51	19	0.35
10.01.2025	N/25/01/03-0144	10	14	55	32	0.28
11.01.2025	N/25/01/03-0223	11	13	46	24	0.21
13.01.2025	N/25/01/03-0439	10	12	60	33	0.46
14.01.2025	N/25/01/03-0493	11	14	53	28	0.22
24.01.2025	N/25/01/05-0008	9	12	51	26	0.49
25.01.2025	N/25/01/05-0068	10	13	48	25	0.25
27.01.2025	N/25/01/5-0135	11	15	59	34	0.34
28.01.2025	N/25/01/5-0284	5	13	57	33	0.36
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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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 LLP)						
Station at & Code : A8, Swamihalli						
Duration : 24 Hrs						
Issue date : 03.02.2025						
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)	
03.01.2025	N/25/01/02-0009	9	11	50	26	0.31
04.01.2025	N/25/01/02-0047	10	9	31	20	0.21
10.01.2025	N/25/01/03-0145	11	16	40	22	0.27
11.01.2025	N/25/01/03-0224	9	12	38	17	0.22
13.01.2025	N/25/01/03-0440	12	15	53	22	0.24
14.01.2025	N/25/01/03-0494	7	13	34	21	0.20
24.01.2025	N/25/01/05-0009	11	12	51	26	0.28
25.01.2025	N/25/01/05-0069	9	11	48	24	0.40
27.01.2025	N/25/01/5-0136	11	13	50	27	0.36
28.01.2025	N/25/01/5-0285	6	10	54	26	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

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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. 2678
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Station at & Code	: A9, Yeswanthanagar
Duration	: 24 Hrs
Issue date	: 03.02.2025
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)	
03.01.2025	N/25/01/02-0010	8	14	51	33	0.45
04.01.2025	N/25/01/02-0048	9	11	59	29	0.36
10.01.2025	N/25/01/03-0146	11	13	54	27	0.27
11.01.2025	N/25/01/03-0225	6	10	50	24	0.22
13.01.2025	N/25/01/03-0441	11	16	45	24	0.36
14.01.2025	N/25/01/03-0495	9	12	40	22	0.48
24.01.2025	N/25/01/05-0010	8	10	53	26	0.35
25.01.2025	N/25/01/05-0070	10	14	45	24	0.28
27.01.2025	N/25/01/5-0137	11	13	54	23	0.45
28.01.2025	N/25/01/5-0286	7	9	50	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

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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. 2678
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Station at & Code	: A10, Tonasigeri
Duration	: 24 Hrs
Issue date	: 03.02.2025
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)	
03.01.2025	N/25/01/02-0001	11	15	56	27	0.31
04.01.2025	N/25/01/02-0039	7	13	48	24	0.27
10.01.2025	N/25/01/03-0137	10	17	52	28	0.22
11.01.2025	N/25/01/03-0216	6	9	43	21	0.34
13.01.2025	N/25/01/03-0432	9	11	56	30	0.28
14.01.2025	N/25/01/03-0486	10	13	43	27	0.28
24.01.2025	N/25/01/05-0001	11	15	59	26	0.31
25.01.2025	N/25/01/05-0061	8	10	47	22	0.26
27.01.2025	N/25/01/5-0128	11	13	39	22	0.25
28.01.2025	N/25/01/5-0277	7	9	54	27	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

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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 : Deogiri Manganese & Iron Ore Mine (ML NO. 2678)			
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)			
Duration : 08 Hrs			
Issue Date : 03.02.2025			
Station at & Code	Date of sample	Lab Code	Particulate mater ($\mu\text{g}/\text{m}^3$)
FA1, Mine Face / Benches	27.01.2025	N/24/01/5-0138	264
FA2, Haulage Road / Service Road	27.01.2025	N/24/01/5-0139	513
FA3, Crushing & Screening Plant	27.01.2025	N/24/01/5-0140	487
FA4, Mineral Stock Yard / Loading	28.01.2025	N/25/01/5-0208	358
FA5, Active Waste Dump	28.01.2028	N/25/01/5-0276	451
Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)			
Particulate mater ($\mu\text{g}/\text{m}^3$)			
Permissible limits for Fugitive Emissions 600 $\mu\text{g}/\text{m}^3$			

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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 LLP)		
Duration	: 08 Hrs		
Issue Date	: 03.02.2025		

Station at & Code	Date of sample	Lab Code	Particulate mater ($\mu\text{g}/\text{m}^3$)
FA1, Mine Face / Benches	10.01.2024	N/25/01/03-0136	358
FA2, Haulage Road / Service Road	10.01.2025	N/25/01/03-0147	523
FA3, Crushing & Screening Plant	10.01.2025	N/25/01/03-0148	496
FA4, Mineral Stock Yard / Loading	11.01.2025	N/25/01/03-0226	287
FA5, Active Waste Dump	11.01.2025	N/25/01/03-0227	358

Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)	Particulate mater ($\mu\text{g}/\text{m}^3$)
Permissible limits for Fugitive Emissions	600 $\mu\text{g}/\text{m}^3$

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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 LLP)		
Duration	: 08 Hrs		
Issue Date	: 03.02.2025		
Station at & Code	Date of sample	Lab Code	Particulate mater ($\mu\text{g}/\text{m}^3$)
FA1, Mine Face / Benches	24.01.2025	N/25/01/05-0011	298
FA2, Haulage Road / Service Road	24.01.2025	N/25/01/05-0012	354
FA3, Crushing & Screening Plant	24.01.2025	N/25/01/05-0013	526
FA4, Mineral Stock Yard / Loading	25.01.2025	N/25/01/05-0071	348
FA5, Active Waste Dump	25.01.2025	N/25/01/05-0072	466
Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)			
			Particulate mater ($\mu\text{g}/\text{m}^3$)
Permissible limits for Fugitive Emissions			600 $\mu\text{g}/\text{m}^3$

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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	01.01.2025 to 31.01.2025
4	Sample Type	Total Dust Fall Rate
5	Duration of Monitoring	One Month
6	Issue Date	03.02.2025

Result

Code	Location	Result	unit	Reference Method
DF1	Deogiri mines office	0.048	g/m ² month	IS 5182 (Part 01) : 2006
DF2	Kammathuru (Near School)	0.031	g/m ² month	IS 5182 (Part 01) : 2006
DF3	Appayyanahalli	0.088	g/m ² month	IS 5182 (Part 01) : 2006
DF4	Subbarayanahalli (Near Hospital)	0.041	g/m ² month	IS 5182 (Part 01) : 2006
DF5	Yeswanthanagar (Near Railway Track)	0.022	g/m ² month	IS 5182 (Part 01) : 2006

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TEST REPORT

Table No. 15

AMBIENT NOISE LEVEL DATA

Report No : ELMES0102501

Client	: The Sandur Manganese & Iron Ores Limited																		
Project	: Mining Lease No. 2678																		
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)																		
Date of monitoring	: 11.01.2025																		
Issue Date	: 03.02.2025																		
Code No.	Monitoring stations	Day			Night														
		L _{min}	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}												
Corezone																			
N1	Mine Pit (SK/CBG)	37.0	55.4	63.5	34.0	48.7	57.5												
N2	Kammathuru ML Area	39.1	52.6	60.2	35.0	47.3	56.1												
N3	Deogiri ML Area	37.5	50.7	58.2	34.0	43.5	50.0												
N4	SBS Plot (Mine Boundary)	39.0	54.8	63.2	34.0	44.6	53.2												
N5	SB Halli ML Area	42.0	57.4	66.0	35.3	46.8	55.2												
N6	Mine area	45.0	62.7	72.0	34.0	46.9	53.2												
Bufferzone																			
N7	Appayanahalli (Narayanapura)	41.0	46.3	50.2	34.0	41.5	48.0												
N8	Vitthalanagar (Navalatti)	39.2	50.4	57.0	35.2	43.7	50.0												
N9	Swamihalli	37.5	47.0	53.2	36.2	41.8	45.0												
N10	Yeshwanthnagar	41.0	50.2	56.2	34.0	41.4	46.3												
N11	Tonasingeri	36.0	49.5	52.3	33.6	41.5	45.3												
N12	Kumaraswamy Temple	37.3	47.5	54.2	34.0	41.2	47.3												
Permissible Limits of Ambient Noise Levels as per CPCB Guidelines Leq. Limit dB(A) <table border="1"> <thead> <tr> <th></th> <th>Day</th> <th>Night</th> </tr> </thead> <tbody> <tr> <td>Industrial areas</td> <td>75</td> <td>70</td> </tr> <tr> <td>Commercial area</td> <td>65</td> <td>55</td> </tr> <tr> <td>Residential area</td> <td>55</td> <td>45</td> </tr> </tbody> </table>									Day	Night	Industrial areas	75	70	Commercial area	65	55	Residential area	55	45
	Day	Night																	
Industrial areas	75	70																	
Commercial area	65	55																	
Residential area	55	45																	


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TEST REPORT

Table No. 16

Report No : N0325250103

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 LLP)
Particulars of sample collected	: STP1, Inlet Water sample from 100 KLD STP, Deogiri
Date of sample collection	: 11.01.2025
Lab Code	: N/25/01/03-0325
Issue Date	: 23.01.2025

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

Sl.No.	Sample Code	STP1	Results	Method of Testing
	Parameters	Results		
1	pH	-	7.25	IS 3025 (P-11)2017
2	Biochemical Oxygen Demand BOD ₅ 27 ⁰ C	mg/l	68	IS 3025 (P-44) 1993 RA 2019
3	Chemical Oxygen Demand (COD)	mg/l	188	IS 3025 (P-58) 2006 RA 2017
4	Total Suspended Solids, at 105 ⁰ C	mg/l	200	IS 3025 (P-16)1984 RA 2017
5	Ammonium (H4-N)	mg/l	1	IS:3025 (P-34) 2023
6	Total Nitrogen (N-Total)	mg/l	8	IS 3025 (Part-34)
7	Fecal coliform	MPN/100ml	50	IS:15185 :2016 RA 2021

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TEST REPORT

Table No. 17

Report No : N0326250103

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 LLP)
Particulars of sample collected	: STP2, Outlet Water sample from 100 KLD STP, Deogiri
Date of sample collection	: 11.01.2025
Lab Code	: N/25/01/03-0326
Issue Date	: 23.01.2025
Ref : Discharge Standards for Treated Sewage Utilized for Landscape/Irrigation/Secondary Purposes	

Sl.No.	Parameters	units	Results	Sewage Effluent Discharge Standards	Method of Testing
1	pH	-	7.00	6.5 - 9.0	IS 3025 (P-11)2017
2	Biochemical Oxygen Demand BOD ₅ 27 ⁰ C	mg/l	8.3	<10	IS 3025 (P-44) 1993 RA 2019
3	Chemical Oxygen Demand (COD)	mg/l	42	<50	IS 3025 (P-58) 2006 RA 2017
4	Total Suspended Solids, at 105 ⁰ C	mg/l	18	<20	IS 3025 (P-16)1984 RA 2017
5	Ammonium (H4-N)	mg/l	0.6	<5	IS:3025 (P-34) 2023
6	Total Nitrogen (N-Total)	mg/l	5.1	<10	IS 3025 (Part-34)
7	Fecal coliform	MPN/100ml	4	<100	IS:15185 :2016 RA 2021

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TEST REPORT

Table No. 18

Name of the Client

Name of the Project

Sample Collected by

Particulars of sample collected

Date of sample collection

Date of sample receipt

Issue Date

Ref:IS : 2296, Water Quality Standards

: The Sandur Manganese & Iron Ores Limited

: Mining Lease No. 2678

: Environmental Laboratory (Unit of Mineral Engineering Services LLP)

: SW1 - Durgammakolla spring water, SW2 - JLK spring water
SW3 - Katrasinghkolla spring water

: 11.01.2025

: 13.01.2025

: 23.01.2025

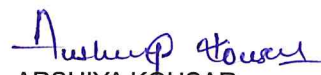
Lab Code		N/25/01/03-0315	N/25/01/03-0316	N/25/01/03-0317	Limits For Stream Water Standards	Method of Testing
Sl.No.	Parameters	Results				
		SW1	SW2	SW3		
1	pH	7.02	6.31	7.22	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units), Max	1	1	5	300	IS:3025(Part-4)2021
3	Odour	Agreeable	Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l), Max	330	146	180	1500	IS:3025(Part-16)2023
5	Total Suspended Solids, mg/l	10	5	16	-	IS 3025 (P-17) 2022
6	Dissolved Oxygen (as O ₂), mg/l, Max	5.4	5.7	5.6	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	180	40	80	-	IS:3025 (P-21):2009 RA 2019
10	Sulphates as SO ₄ (mg/l), Max	20	8.6	12.2	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	45	40	70	600	IS:3025(Part-32) ;1988RA2019
13	Fluoride (as F),mg/l, Max	0.35	0.09	0.4	1.5	APHA 23rd Edition 4500F
14	Sulphide (as H ₂ S) , 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	0.011	0.05	0.09	50	IS:3025(P-2) 2019
17	Percent of Sodium (%)	22	24	32	-	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	180	166	140	5000	IS:1622:1981

""END OF REPORT""


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TEST REPORT

Table No.19

Table No. 1

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 LLP)				
Particulars of sample collected	: SW4 - Hari Shankar Spring Water, SW5 - Narihalla Dam water				
Date of sample collection	: 11.01.2025				
Date of sample receipt	: 13.01.2025				
Issue Date	: 23.01.2025				
Ref:IS : 2296, Water Quality Standards					
Lab Code		N/25/01/03-0318	N/25/01/03-0319	Limits For Stream Water Standards	Method of Testing
Sl.No.	Parameters	Results			
		SW4	SW5		
1	pH	5.64	8.50	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units), Max	1	3	300	IS:3025(Part-4)2021
3	Odour	Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l), Max	56.0	360.0	1500	IS:3025(Part-16)2023
5	Total Suspended Solids, mg/l	5	28	-	IS 3025 (P-17) 2022
6	Dissolved Oxygen (as O ₂), mg/l, Max	5.80	5.50	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	22	160	-	IS:3025 (P-21):2009 RA 2019
10	Sulphates as SO ₄ (mg/l), Max	3.5	51.5	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	20	80	600	IS:3025(Part-32) ;1988RA2019
13	Fluoride (as F),mg/l, Max	0.2	0.7	1.5	APHA 23rd Edition 4500F
14	Sulphide (as H ₂ S), 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 (%)	24.00	20.00	-	IS 11624 .2009
18	Residual Sodium Carbonate (meq/l)	<0.05	<0.05	-	IS:2488 (P-5) 1976
19	Total Coliform, MPN/100ml	60	120	5000	IS:1622:1981

""END OF REPORT""



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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 LLP)					
Particulars of sample collected		: GW1 - Deogiri Mine Office Bore water, GW2 - Kammaturu Bore water, GW3 - Appayyanahalli (Narayanpura) Bore water					
Date of sample collection		: 11.01.2025					
Issue Date		: 23.01.2025					
Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)							
Sl. No.	Lab Code	N/25/01/03-0320	N/25/01/03-0321	N/25/01/03-0322	Desirable Limits	Permissible Limits	Method of Testing
	Sample Code	GW1	GW2	GW3			
	Parameters	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	6.81	6.50	8.02	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11) 2022
4	Turbidity, NTU, Max	<0.1	2.1	1.5	1	5	IS:3025 (P-10) 1984 RA 2017
5	Electrical Conductivity (µmhos/cm)	165.0	420.0	1500.0	—	—	IS 3025 (P-14)
6	Total Dissolved Solids, mg/l, Max	90.0	226.0	840.0	500	2000	IS:3025 (P-16) 1984 RA 2017
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	8.00	10.00	88.10	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	25.0	50.0	110.0	250	1000	IS:3025 (P-32) 1988 RA 2019
12	Fluoride (as F), mg/l, Max	0.32	0.26	0.61	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	2.43	4.86	68.00	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	6.70	8.50	18.10	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	14.2	30.0	140.0	200	400	IS:3025 (P-24) Sec 1 2022
19	Alkalinity (as CaCO ₃), mg/l, Max	30.00	105.0	500.0	200	600	IS:3025 (P-23) 1986 RA 2019
20	Total Hardness (as CaCO ₃), mg/l, Max	30.0	45.0	500.0	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	6	58	40	-	-	IS:3025 (Part-45) 1993 RA 2019
23	Potassium, (as K), mg/l, Max	3	8	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"



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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 LLP)				
Particulars of sample collected		: GW4 - SB Halli Bore water (near hospital), GW5 - Yeshwanthnagar Bore water (near railway track)				
Date of sample collection		: 11.01.2025				
Issue Date		: 23.01.2025				
Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)						
Sl. No.	Lab Code	N/25/01/03-0323		Desirable Limits	Permissible Limits	Method of Testing
	Sample Code	GW4	GW5			
	Parameters	Results				
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	8.05	7.78	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11) 2022
4	Turbidity, NTU, Max	2.2	1.1	1	5	IS:3025 (P-10) 1984 RA 2017
5	Electrical Conductivity (µmhos/cm)	410.0	2280.0	—	—	IS 3025 (P-14)
6	Total Dissolved Solids, mg/l, Max	220.0	1340.0	500	2000	IS:3025 (P-16) 1984 RA 2017
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	16.00	176.30	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	55.00	400.00	250	1000	IS:3025 (P-32) 1988 RA 2019
12	Fluoride (as F), mg/l, Max	0.20	0.81	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	12.10	87.50	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	11.80	43.00	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	30.00	135.00	200	400	IS:3025 (P-24) Sec 1 2022
19	Alkalinity (as CaCO ₃), mg/l, Max	100.0	430.0	200	600	IS:3025 (P-23): 1986 RA 2019
20	Total Hardness (as CaCO ₃), mg/l, Max	90.0	800.0	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	60	96	—	—	IS:3025 (Part-45) 1993 RA 2019
23	Potassium, (as K), mg/l, Max	6	8	—	—	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"

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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 LLP)					
Date of sample collection		: 11.01.2025					
Issue Date		: 03.02.2025					
Lab Code			N/25/01/03-0328	N/25/01/03-0329	N/25/01/03-0330	N/25/01/03-0331	N/25/01/03-0332
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	%	31.28	34.22	32.56	32.00	33.82
	Clay	%	25.22	32.12	28.32	29.21	26.2
	Silt	%	43.5	33.66	39.12	38.79	39.98
4	Moisture Content	%	7.65	7.33	7.42	6.88	6.32
5	Bulk Density	gm/cc	1.92	1.82	1.75	1.67	1.72
6	Water holding capacity	%	31.2	30.21	24.55	28.33	22.25
7	pH	--	6.81	6.88	7.65	7.56	6.54
8	EC	m.mohs/cm	0.196	0.275	0.231	0.292	0.192
Chemical Properties							
9	Organic Carbon	%	0.65	0.33	0.28	1.18	1.72
10	Nitrogen as N	Kg/Ha	127	242	134	142	192
11	Phosphorous as P	Kg/Ha	6.63	8.41	7.62	7.92	7.66
12	Potassium as K ₂ O	Kg/Ha	190	125	130	142	155
13	Sodium as Na	mg/kg	34	28	47	36	30
14	Chloride as Cl	mg/kg	136	116	151	142	226
15	Sulphate as SO ₄	mg/kg	32	33	29	30	35
Sample Locations :							
S1 - Top soil (Kammathuru)							
S2 - Top soil (Deogiri)							
S3 - Top soil (SB Halli)							
S4 - Active Dump 1							
S5 - Active Dump 2							


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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 LLP)					
Date of sample collection		: 11.01.2025					
Issue Date		: 03.02.2025					
Lab Code			N/25/01/03-0333	N/25/01/03-0334	N/25/01/03-0335	N/25/01/03-0336	N/25/01/03-0337
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	%	32.82	30.88	36.52	35.88	38.42
	Clay	%	30.12	29.21	30.21	32.24	31.25
	Silt	%	37.06	39.91	33.27	31.88	30.33
4	Moisture Content	%	7.48	6.92	7.66	6.88	6.98
5	Bulk Density	gm/cc	1.32	2.85	1.92	1.92	7.85
6	Water holding capacity	%	33.62	28.99	30.28	32.33	41.25
7	pH	--	7.52	7.18	7.56	7.56	7.26
8	EC	m.mohs/cm	0.432	0.62	0.62	0.396	0.582
Chemical Properties							
9	Organic Carbon	%	0.69	0.58	0.68	0.77	0.52
10	Nitrogen as N	Kg/Ha	133	120	142	182	142
11	Phosphorous as P	Kg/Ha	28	35	52	62	45
12	Potassium as K ₂ O	Kg/Ha	140	158	140	156	140
13	Sodium as Na	mg/kg	52	43	50	42	30
14	Chloride as Cl	mg/kg	30	32	33	38	36
15	Sulphate as SO ₄	mg/kg	32	30	36	30	38
Sample Locations :							
S6 - Appayyanahalli agriculture lan							
S7 - Vitthalanagar agriculture land							
S8 - Swamihalli agriculture land							
S9 -Tonasigere agriculture land							
S10 - Yeshwanthnagar agriculture land							

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TEST REPORT

Table No. 24

Stack Monitoring Report

Report No.N0308250103

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 & Capacity :	DG 1010 KVA (808 KW)
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	10.01.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	10.01.2025
Lab Code :	N/25/01/03-0308
Issue date :	03.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature ($^{\circ}\text{C}$)	30
3	Stack Temperature ($^{\circ}\text{C}$)	178
4	Velocity (m/s)	14.59
5	Stack diameter (M)	0.30
6	Quantity of flue Gas Discharged into atmosphere (Nm^3/hr)	3338
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	Due on 15.07.2025
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	35.45	360
2	NMHC (as C) (at 15 % O_2)	mg/ Nm^3	38.23	100
3	PM (as C) (at 15 % O_2)	mg/ Nm^3	36.00	75
4	CO (at 15 % O_2)	(mg/ Nm^3)	62.00	150

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TEST REPORT

Table No. 25

Stack Monitoring Report

Report No.N0309250103

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 & Capacity :	DG Set 62.5 KVA
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	10.01.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	10.01.2025
Lab Code :	N/25/01/03-0309
Issue date :	03.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	28
3	Stack Temperature (°C)	142
4	Velocity (m/s)	7.5
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	331
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	Due on 15.07.2025
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	0.100	<0.2
2	CO	g/Kw-hr	0.079	<3.5
3	Nox +HC	g/Kw-hr	0.614	<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

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TEST REPORT

Table No. 26

Stack Monitoring Report

Report No.N0310250103

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 & Capacity		: DG Set 6.0 KVA Doosan Light Source		
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)		
Date of Collection		: 10.01.2025		
Particulars of Sample Collected		: Emissions from stack collected through stack sample VSS1		
Date of Sample Receipt		: 10.01.2025		
Lab Code		: N/25/01/03-0310		
Issue date		: 03.02.2025		
STACK DETAILS				
1	Fuel Used	Diesel		
2	Ambient Temperature (°C)	28		
3	Stack Temperature (°C)	138		
4	Velocity (m/s)	5.96		
5	Stack diameter (M)	0.15		
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	251		
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	Due on 15.07.2025		
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	0.125	<0.2
2	CO	g/Kw-hr	0.251	<3.5
3	Nox +HC	g/Kw-hr	0.711	<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


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TEST REPORT

Table No. 27

Stack Monitoring Report

Report No.N0311250103

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 & Capacity :	DG Set 6.0 KVA Doosan Light Source
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	11.01.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	13.01.2025
Lab Code :	N/25/01/03-0311
Issue date :	03.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	28
3	Stack Temperature (°C)	133
4	Velocity (m/s)	6.62
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	297
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	Due on 15.07.2025
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	0.115	<0.2
2	CO	g/Kw-hr	0.298	<3.5
3	Nox +HC	g/Kw-hr	0.647	<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

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TEST REPORT

Table No. 28

Stack Monitoring Report

Report No.N0312250103

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 & Capacity :	DG Set 125 KVA
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	11.01.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	13.01.2025
Lab Code :	N/25/01/03-0312
Issue date :	03.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	28
3	Stack Temperature (°C)	145
4	Velocity (m/s)	13.30
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	583
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	Due on 15.07.2025
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	0.065	<0.2
2	CO	g/Kw-hr	0.069	<3.5
3	Nox +HC	g/Kw-hr	0.139	<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
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TEST REPORT

Table No.29

Stack Monitoring Report

Report No.N0313250103

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 & Capacity :	DG Set 82.5 KVA
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	11.01.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	13.01.2025
Lab Code :	N/25/01/03-0313
Issue date :	03.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	28
3	Stack Temperature (°C)	125
4	Velocity (m/s)	7.81
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	360
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	Due on 15.07.2025
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	0.044	<0.2
2	CO	g/Kw-hr	0.12	<3.5
3	Nox +HC	g/Kw-hr	0.166	<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
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TEST REPORT

Table No. 30

Stack Monitoring Report

Report No.N0314250103

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 & Capacity :	DG Set 7.5 KVA
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	11.01.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	13.01.2025
Lab Code :	N/25/01/03-0314
Issue date :	03.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	28
3	Stack Temperature (°C)	136
4	Velocity (m/s)	7.44
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	334
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	Due on 15.07.2025
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	0.133	<0.2
2	CO	g/Kw-hr	0.222	<3.5
3	Nox +HC	g/Kw-hr	0.845	<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
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TEST REPORT

Table No. 31

Stack Monitoring Report

Report No.N0379250103

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 & Capacity :	DG 6 KVA Doosan Light Source
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	13.01.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	14.01.2025
Lab Code :	N/25/01/03-0379
Issue date :	03.03.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature ($^{\circ}\text{C}$)	28
3	Stack Temperature ($^{\circ}\text{C}$)	122
4	Velocity (m/s)	6.76
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm^3/hr)	313
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	Due on 15.07.2025
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	0.120	<0.2
2	CO	g/Kw-hr	0.312	<3.5
3	Nox +HC	g/Kw-hr	1.723	<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
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TEST REPORT

Table No. 32

Stack Monitoring Report

Report No. N0380250103

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 & Capacity : DG 6 KVA Doosan Light Source

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

Date of Collection : 13.01.2025

Particulars of Sample Collected : Emissions from stack collected through stack sample VSS1

Date of Sample Receipt : 14.01.2025

Lab Code : N/25/01/03-0380

Issue date : 03.03.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	28
3	Stack Temperature (°C)	132
4	Velocity (m/s)	7.39
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	334
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	Due on 15.07.2025
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	0.178	<0.2
2	CO	g/Kw-hr	0.334	<3.5
3	Nox +HC	g/Kw-hr	0.150	<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

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