

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
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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/040325/2678/1575

04 March 2025

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

Dear Sir,

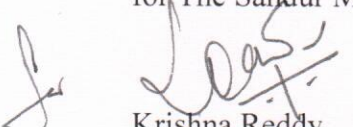
Sub: Submission of reports pertaining to monitoring environmental parameters for the month of February 2025 in respect of Mining Lease No. 2678.

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 February 2025 in respect of Mining Lease No. 2678 of The Sandur Manganese & Iron Ores Limited.

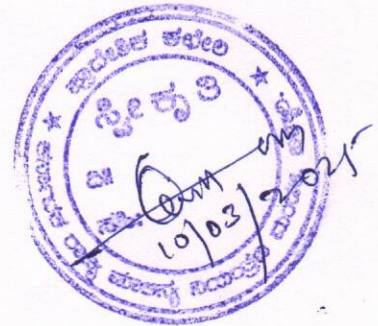
Kindly request you to acknowledge receipt of the reports and oblige.

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


Krishna Reddy
Vice President - Mines



Encl: Monitoring Reports



ENVIRONMENTAL MONITORING REPORT

February, 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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(UNIT OF MINERAL ENGINEERING SERVICES LLP)

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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 : 03.03.2025 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)	
03.02.2025	N/25/02/1-0100	10	14	52	28	0.32
04.02.2025	N/25/02/1-0148	12	18	57	30	0.25
10.02.2025	N/25/02/3-0010	11	15	60	33	0.42
11.02.2025	N/25/02/3-0076	8	12	49	28	0.22
21.02.2025	N/25/02/5-0150	12	18	50	28	0.48
22.02.2025	N/25/02/5-0238	10	13	56	31	0.36
24.02.2025	N/25/02/5-0333	7	11	53	27	0.27
25.02.2025	N/25/02/5-0447	12	14	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


 M.SACHIN RAJU
 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.



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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	: 03.03.2025
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)	
03.02.2025	N/25/02/1-0101	10	11	55	28	0.47
04.02.2025	N/25/02/1-0149	12	18	60	33	0.25
10.02.2025	N/25/02/3-0011	11	17	47	25	0.36
11.02.2025	N/25/02/3-0077	13	15	54	28	0.24
21.02.2025	N/25/02/5-0151	9	10	45	23	0.44
22.02.2025	N/25/02/5-0239	6	12	58	39	0.35
24.02.2025	N/25/02/5-0334	7	11	50	26	0.28
25.02.2025	N/25/02/5-0448	11	18	48	25	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

M. Sachin Raju
M.SACHIN RAJU

T.M. - Chemical

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No.3

AMBIENT AIR QUALITY

Name of the Client	: The Sandur Manganese & Iron Ores Limited
Name of the Project	: Mining Lease No. 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	: 03.03.2025
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)	
03.02.2025	N/25/02/1-0102	7	11	40	22	0.25
04.02.2025	N/25/02/1-0150	10	16	39	19	0.28
10.02.2025	N/25/02/3-0012	11	18	52	25	0.35
11.02.2025	N/25/02/3-0078	11	13	57	30	0.22
21.02.2025	N/25/02/5-0152	8	14	55	28	0.26
22.02.2025	N/25/02/5-0240	11	16	49	25	0.33
24.02.2025	N/25/02/5-0335	12	13	51	28	0.28
25.02.2025	N/25/02/5-0449	8	14	44	27	0.21
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 : 03.03.2025						
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)	
03.02.2025	N/25/02/1-0103	9	15	39	22	0.25
04.02.2025	N/25/02/1-0151	12	18	40	26	0.23
10.02.2025	N/25/02/3-0013	13	15	50	25	0.20
11.02.2025	N/25/02/3-0079	8	15	45	31	0.30
21.02.2025	N/25/02/5-0153	7	13	50	27	0.24
22.02.2025	N/25/02/5-0241	9	10	42	25	0.22
24.02.2025	N/25/02/5-0336	8	12	48	22	0.26
25.02.2025	N/25/02/5-0450	10	19	38	18	0.32
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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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 : 03.03.2025						
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)	
03.02.2025	N/25/02/1-0104	7	9	56	32	0.42
04.02.2025	N/25/02/1-0152	10	12	43	25	0.25
10.02.2025	N/25/02/3-0014	14	18	58	32	0.33
11.02.2025	N/25/02/3-0080	10	11	40	19	0.24
21.02.2025	N/25/02/5-0154	12	15	46	22	0.45
22.02.2025	N/25/02/5-0242	10	12	53	27	0.40
24.02.2025	N/25/02/5-0337	12	16	56	29	0.30
25.02.2025	N/25/02/5-0451	10	14	45	26	0.25
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

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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 : 03.03.2025						
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)	
03.02.2025	N/25/02/1-0105	11	16	56	32	0.33
04.02.2025	N/25/02/1-0153	13	15	53	30	0.23
10.02.2025	N/25/02/3-0015	10	13	50	28	0.21
11.02.2025	N/25/02/3-0081	9	12	47	22	0.33
21.02.2025	N/25/02/5-0155	13	15	57	34	0.25
22.02.2025	N/25/02/5-0243	8	11	49	24	0.28
24.02.2025	N/25/02/5-0338	12	16	43	23	0.31
25.02.2025	N/25/02/5-0452	10	18	58	30	0.25
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	2 8 Hr

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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	: 03.03.2025
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)	
03.02.2025	N/25/02/1-0106	9	11	60	34	0.22
04.02.2025	N/25/02/1-0154	11	15	53	28	0.36
10.02.2025	N/25/02/3-0016	9	11	57	30	0.47
11.02.2025	N/25/02/3-0082	8	14	49	27	0.22
21.02.2025	N/25/02/5-0156	12	13	50	28	0.23
22.02.2025	N/25/02/5-0244	11	15	43	23	0.21
24.02.2025	N/25/02/5-0339	10	14	51	26	0.20
25.02.2025	N/25/02/5-0453	11	18	40	24	0.24
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 : 03.03.2025						
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)	
03.02.2025	N/25/02/1-0107	9	10	48	25	0.22
04.02.2025	N/25/02/1-0155	11	15	53	29	0.26
10.02.2025	N/25/02/3-0017	12	16	42	21	0.33
11.02.2025	N/25/02/3-0083	10	13	45	24	0.42
21.02.2025	N/25/02/5-0157	9	10	55	28	0.24
22.02.2025	N/25/02/5-0245	10	11	53	22	0.20
24.02.2025	N/25/02/5-0340	9	12	50	24	<0.20
25.02.2025	N/25/02/5-0454	8	10	38	19	0.20
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 : 03.03.2025 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)	
03.02.2025	N/25/02/1-0108	11	15	52	28	0.21
04.02.2025	N/25/02/1-0156	12	18	48	25	0.31
10.02.2025	N/25/02/3-0018	12	13	50	29	0.25
11.02.2025	N/25/02/3-0084	10	17	55	30	0.23
21.02.2025	N/25/02/5-0158	9	13	46	27	0.42
22.02.2025	N/25/02/5-0246	11	18	57	29	0.35
24.02.2025	N/25/02/5-0341	12	13	44	23	0.37
25.02.2025	N/25/02/5-0455	10	11	52	27	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.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	: 03.03.2025
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)	
03.02.2025	N/25/02/1-0109	11	12	38	21	0.22
04.02.2025	N/25/02/1-0157	9	11	44	24	0.45
10.02.2025	N/25/02/3-0019	13	17	49	27	0.20
11.02.2025	N/25/02/3-0085	11	12	52	29	0.21
21.02.2025	N/25/02/5-0159	12	13	37	21	0.33
22.02.2025	N/25/02/5-0247	9	10	47	24	0.42
24.02.2025	N/25/02/5-0342	12	13	50	28	0.36
25.02.2025	N/25/02/5-0456	8	11	53	29	0.27
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	: 03.03.2025		
Station at & Code	Date of sample	Lab Code	Particulate mater (µg/m³)
FA1, Mine Face / Benches	24.02.2025	N/25/02/5-0344	321
FA2, Haulage Road / Service Road	24.02.2025	N/25/02/5-0345	385
FA3, Crushing & Screening Plant	24.02.2025	N/25/02/5-0346	399
FA4, Mineral Staock Yard / Loading	25.02.2025	N/25/02/5-0458	254
FA5, Active Waste Dump	25.02.2025	N/25/02/5-0459	421
Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)			
Particulate mater (µg/m³)			
Permissible limits for Fugitive Emissions		600 µg/m³	


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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 : 03.03.2025			
Station at & Code	Date of sample	Lab Code	Particulate mater ($\mu\text{g}/\text{m}^3$)
FA1, Mine Face / Benches	03.02.2025	N/25/02/1-0111	356
FA2, Haulage Road / Service Road	03.02.2025	N/25/02/1-0112	485
FA3, Crushing & Screening Plant	03.02.2025	N/25/02/1-0113	491
FA4, Mineral Staoock Yard / Loading	04.02.2025	N/25/02/1-0159	354
FA5, Active Waste Dump	04.02.2025	N/25/02/1-0160	385
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 : 03.03.2025			
Station at & Code	Date of sample	Lab Code	Particulate mater ($\mu\text{g}/\text{m}^3$)
FA1, Mine Face / Benches	21.02.2025	N/25/02/5-0161	256
FA2, Haulage Road / Service Road	21.02.2025	N/25/02/5-0162	385
FA3, Crushing & Screening Plant	21.02.2025	N/25/02/5-0163	452
FA4, Mineral Stock Yard / Loading	22.02.2025	N/25/02/5-0249	365
FA5, Active Waste Dump	22.02.2025	N/25/02/5-0250	387
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	01.02.2025 to 28.02.2025
4	Sample Type	Total Dust Fall Rate
5	Duration of Monitoring	One Month
6	Issue Date	03.03.2025

Result

Code	Location	Result	unit	Reference Method
DF1	Deogiri mines office	0.032	g/m^2 month	IS 5182 (Part 01) : 2006
DF2	Kammathuru (Near School)	0.036	g/m^2 month	IS 5182 (Part 01) : 2006
DF3	Appayyanahalli	0.020	g/m^2 month	IS 5182 (Part 01) : 2006
DF4	Subbarayanahalli (Near Hospital)	0.033	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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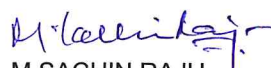
TEST REPORT

Table No. 15

AMBIENT NOISE LEVEL DATA

Report No : ELMES142502

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	: 10.02.2025																		
Issue Date	: 03.03.2025																		
Code No.	Monitoring stations	Day			Night														
		L _{min}	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}												
Corezone																			
N1	Mine Pit (SK/CBG)	37.2	56.5	65.2	34.0	49.2	58.2												
N2	Kammathuru ML Area	40.1	53.3	61.2	35.0	49.8	57.0												
N3	Deogiri ML Area	38.0	50.5	57.2	34.0	43.5	50.0												
N4	SBS Plot (Mine Boundary)	39.0	52.9	60.1	35.0	45.1	54.3												
N5	SB Halli ML Area	40.3	56.2	64.2	35.3	45.0	52.3												
N6	Mine area	43.2	59.8	68.5	34.0	45.9	51.0												
Bufferzone																			
N7	Appayanahalli (Narayanapura)	37.0	46.6	52.3	34.0	40.7	46.2												
N8	Vitthalanagar (Navalatti)	39.0	49.7	56.2	34.8	42.2	45.2												
N9	Swamihalli	36.0	47.4	54.3	36.2	41.8	45.0												
N10	Yeshwanthnagar	40.0	51.6	58.0	34.0	43.0	48.2												
N11	Tonasingeri	36.0	50.5	53.8	34.2	41.5	45.1												
N12	Kumaraswamy Temple	36.5	46.0	50.2	33.6	40.1	45.0												
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 : N037025023

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	: 10.02.2025
Lab Code	: N/25/02/3-0370
Issue Date	: 21.02.2025
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	-	7.12	IS 3025 (P-11)2017
2	Biochemical Oxygen Demand BOD ₅ 27 ^o C	mg/l	74	IS 3025 (P-44) 1993 RA 2019
3	Chemical Oxygen Demand (COD)	mg/l	196	IS 3025 (P-58) 2006 RA 2017
4	Total Suspended Solids, at 105 ^o C	mg/l	260	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	9	IS 3025 (Part-34)
7	Fecal coliform	MPN/100ml	60	IS:15185 :2016 RA 2021

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TEST REPORT

Table No. 17

Report No : N0371250203

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	: 10.02.2025
Lab Code	: N/25/02/3-0371
Issue Date	: 21.02.2025
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	-	6.88	6.5 - 9.0	IS 3025 (P-11)2017
2	Biochemical Oxygen Demand BOD ₅ 27 ⁰ C	mg/l	8.5	<10	IS 3025 (P-44) 1993 RA 2019
3	Chemical Oxygen Demand (COD)	mg/l	38	<50	IS 3025 (P-58) 2006 RA 2017
4	Total Suspended Solids, at 105 ⁰ C	mg/l	16	<20	IS 3025 (P-16)1984 RA 2017
5	Ammonium (H4-N)	mg/l	0.4	<5	IS:3025 (P-34) 2023
6	Total Nitrogen (N-Total)	mg/l	6.2	<10	IS 3025 (Part-34)
7	Fecal coliform	MPN/100ml	5	<100	IS:15185 :2016 RA 2021

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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 LLP)
 Particulars of sample collected : SW1 - Durgammakolla spring water, SW2 - JLK spring water
 SW3 - Katrasinghkolla spring water
 Date of sample collection : 10.02.2025
 Date of sample receipt : 11.02.2025
 Issue Date : 21.02.2025
 Ref:IS : 2296, 1982 Class C Norms (Stream Water Standards)

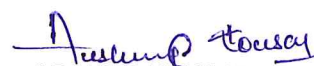
Lab Code		N/25/02/3-0360	N/25/02/3-0361	N/25/02/3-0362	Limits For Stream Water Standards	Method of Testing
Sl.No.	Parameters	Results				
		SW1	SW2	SW3		
1	pH	7.11	6.85	7.32	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units), Max	<1.0	<1.0	5	300	IS:3025(Part-4)2021
3	Odour	Agreeable	Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l), Max	282	230	140	1500	IS:3025(Part-16)2023
5	Total Suspended Solids, mg/l	52	23	22	-	IS 3025 (P-17) 2022
6	Dissolved Oxygen (as O ₂), mg/l	5.6	5.3	5.7	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 & Grease, mg/l	<1.0	<1.0	<1.0	0.1	IS:3025(Part 39)2021
9	Total Hardness (as CaCO ₃),mg/l,Max	266	88	72	-	IS:3025 (P-21):2009 RA 2019
10	Sulphates as SO ₄ (mg/l), Max	3.52	2.65	20.10	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	23.2	81.2	52.0	600	IS:3025(Part-32) ;1988RA2019
13	Fluoride (as F),mg/l, Max	0.65	0.32	0.51	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	0.021	0.034	0.421	50	IS:3025(P-2) 2019
17	Percent of Sodium (%)	20	28	40	-	IS 11624 .2009
18	Residual Sodium Carbonate (meq/l)	<0.5	<0.5	<0.5	-	IS 11624 .2009
19	Total Coliform, MPN/100ml	120	160	110	5000	IS:1622:1981

""END OF REPORT""


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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 LLP)			
Particulars of sample collected		: SW4 - Hari Shankar Spring Water, SW5 - Narihalla Dam water			
Date of sample collection		: 10.02.2025			
Date of sample receipt		: 11.02.2025			
Issue Date		: 21.02.2025			
Ref:IS : 2296, 1982 Class C Norms (Stream Water Standards)					
Lab Code		N/25/02/3-0363	N/25/02/3-0364	Limits For Stream Water Standards	Method of Testing
Sl.No.	Parameters	Results			
		SW4	SW5		
1	pH	6.65	8.74	6.5 to 8.5	IS:3025(Part-11)2022
2	Colour (Hazen Units), Max	3.0	3.0	300	IS:3025(Part-4)2021
3	Odour	Agreeable	Agreeable	-	IS:3025 (P-5) 2018
4	Total Dissolved Solids (mg/l), Max	54.0	390.0	1500	IS:3025(Part-16)2023
5	Total Suspended Solids, mg/l	16	36	-	IS 3025 (P-17) 2022
6	Dissolved Oxygen (as O ₂), mg/l	5.70	5.50	Min 4	IS:3025(Part-38)1989RA 2019
7	Biochemical Oxygen Demand (as O ₂), mg/l	<3.0	<3.0	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	20.0	175	-	IS:3025 (P-21):2009 RA 2019
10	Sulphates as SO ₄ (mg/l), Max	5.0	62.0	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	18.0	95	600	IS:3025(Part-32) ;1988RA2019
13	Fluoride (as F),mg/l, Max	0.35	0.5	1.5	APHA 23rd Edition 4500F
14	Sulphide (as H ₂ S) , mg/l, Max	<0.01	0.67	-	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	0.165	0.08	50	IS:3025(P-2) 2019
17	Percent of Sodium (%)	30.0	36.00	-	IS 11624 .2009
18	Residual Sodium Carbonate (meq/l)	<0.5	<0.5	-	IS 11624 .2009
19	Total Coliform, MPN/100ml	80	88	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 - Borewell near Kumaraswamy temple, GW3 - Appayyanahalli (Narayanpura) Bore water					
Date of sample collection		: 10.02.2025					
Issue Date		: 21.02.2025					
Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)							
Sl. No.	Lab Code	N/25/02/3-0365	N/25/02/3-0366	N/25/02/3-0367	Desirable Limits	Permissible Limits	Method of Testing
	Sample Code Parameters	GW1	GW2	GW3			
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	6.60	6.55	7.8	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11) 2022
4	Turbidity, NTU, Max	1.8	3.5	2.0	1	5	IS:3025 (P-10) 1984 RA 2017
5	Electrical Conductivity (µmhos/cm)	180.0	410.0	1450	—	—	IS 3025 (P-14)
6	Total Dissolved Solids, mg/l, Max	98.0	222.0	812.0	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	9.6	14.4	92.1	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	28.00	56.0	90.0	250	1000	IS:3025 (P-32) 1988 RA 2019
12	Fluoride (as F), mg/l, Max	0.41	0.48	1.23	1	1.5	APHA 23rd Edition 4500F
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	2.4	3.4	56.0	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	9.5	10.2	25.6	45	45	APHA 23rd Edition 4500B
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	12.8	28.0	160.0	200	400	IS:3025 (P-24) Sec 1 2022
19	Alkalinity (as CaCO ₃), mg/l, Max	28.0	90.0	410.0	200	600	IS:3025 (P-23):1986 RA 2019
20	Total Hardness (as CaCO ₃), mg/l, Max	34.0	50.0	460.0	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	16.2	10.22	130	-	-	IS:3025 (Part-45) 1993 RA 2019
23	Potassium, (as K), mg/l, Max	<1.0	3.8	1.5	-	-	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	<0.005	<0.005	<0.005	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-2) 2019
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"

BINU MANI

T.M. - Microbiology

Govt. Analyst / Authorised Signatory

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TEST REPORT

Table No. 21

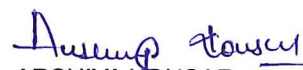
Name of the Client		: The Sandur Manganese & Iron Ores Limited				
Name of the Project		: Mining Lease No. 2678				
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)				
Particulars of sample collected		: GW4 - SB Halli Bore water (near hospital), GW5 - Yeshwanthnagar Bore water (near railway track)				
Date of sample collection		: 10.02.2025				
Issue Date		: 21.02.2025				
Ref : IS:10500-2012 Norms Amendment - 4 (Drinking Water Standards)						
Lab Code		N/25/02/3-0368	N/25/02/3-0369			
Sl. No.	Sample Code	GW4	GW5	Desirable Limits	Permissible Limits	Method of Testing
	Parameters	Results				
1	Colour (Hazen Units)	3	1	5	15	IS:3025 (P-4) 2021
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025 (P-5) 2018
3	pH Value	7.86	7.22	6.5 to 8.5	6.5 - 8.5	IS:3025 (P-11) 2022
4	Turbidity, NTU, Max	4.0	1.2	1	5	IS:3025 (P-10) 1984 RA 2017
5	Electrical Conductivity (µmhos/cm)	360.0	2300.0	--	--	IS 3025 (P-14)
6	Total Dissolved Solids, mg/l, Max	196.0	1380.0	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	17.60	148.20	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	40.00	380.00	250	1000	IS:3025 (P-32) 1988 RA 2019
12	Fluoride (as F), mg/l, Max	0.41	0.76	1	1.5	APHA 23rd Edition 4500F
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	7.78	70.40	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	15.80	41.60	45	45	APHA 23rd Edition 4500B
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	26.00	142.00	200	400	IS:3025 (P-24) Sec 1 2022
19	Alkalinity (as CaCO ₃) mg/l, Max	70.0	540.0	200	600	IS:3025 (P-23):1986 RA 2019
20	Total Hardness (as CaCO ₃), mg/l, Max	76.0	560.0	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	10.3	220	--	--	IS:3025 (Part-45) 1993 RA 2019
23	Potassium, (as K), mg/l, Max	5.8	1.5	--	--	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-2) 2019
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			: 10.02.2025				
Issue Date			: 03.03.2025				
Lab Code			N/25/02/3-0374	N/25/02/3-0375	N/25/02/3-0376	N/25/02/3-0377	N/25/02/3-0378
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	--	LOAM	CLAY LOAM	CLAY LOAM	CLAY LOAM	CLAY LOAM
3	Size Distribution						
	Sand	%	31.28	34.22	32.56	32.00	34.00
	Clay	%	25.22	32.12	28.32	29.21	39.98
	Silt	%	43.50	34.00	39.12	38.64	26.20
4	Moisture Content	%	12.35	10.86	11.82	10.86	11.82
5	Bulk Density	gm/cc	1.92	1.82	1.75	1.67	1.72
6	Water holding capacity	%	31.20	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	0.350	0.275	0.422	0.292	0.334
Chemcial Properties							
9	Organic Carbon	%	0.65	0.33	0.28	0.63	0.58
10	Nitrogen as N	Kg/Ha	238	242	277	263	244
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	34.00	28.00	47.00	36.00	30.00
14	Chloride as Cl	mg/kg	136.00	116.00	151.00	142.00	226.00
15	Sulphate as SO ₄	mg/kg	38.00	34.00	42.00	30.00	35.00
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			: 10.02.2025				
Issue Date			: 03.03.2025				
Lab Code			N/25/02/3-0379	N/25/02/3-0380	N/25/02/3-0381	N/25/02/3-0382	N/25/02/3-0383
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	CLAY LOAM	Slity Clay	Clay Loam
3	Size Distribution						
	Sand	%	32.82	30.88	36.52	35.88	38.42
	Clay	%	37.00	39.91	33.27	32.24	31.25
	Silt	%	30.12	29.00	30.21	31.88	30.33
4	Moisture Content	%	10.96	13.82	11.34	10.83	11.38
5	Bulk Density	gm/cc	1.32	1.59	1.69	1.53	1.61
6	Water holding capacity	%	33.62	28.99	30.28	32.33	41.25
7	pH	--	6.88	6.59	6.92	6.72	6.89
8	EC	m.mohs/cm	0.485	0.563	0.620	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	236	248	277	263	277
11	Phosphorous as P	Kg/Ha	8.63	7.96	8.63	8.48	9.86
12	Potassium as K ₂ O	Kg/Ha	140	158	140	156	140
13	Sodium as Na	mg/kg	52.00	43.00	50.00	42.00	30.00
14	Chloride as Cl	mg/kg	36.00	34.00	36.00	34.00	36.00
15	Sulphate as SO ₄	mg/kg	32.00	30.00	36.00	30.00	38.00
Sample Locations :							
S6 - Appayyanahalli agriculture land							
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. N031925025

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 :	21.02.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	22.02.2025
Lab Code :	N/25/02/5-0319
Issue date :	03.03.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	30
3	Stack Temperature (°C)	174
4	Velocity (m/s)	15.2
5	Stack diameter (M)	0.30
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	3460
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	15.07.2025
11	Sampling and Analysis Method	IS 11255 & flue gas analyser

Pollutional Parameters (Result)

Sl.No	Parameters	Unit	Results	Standard
1	NO _x (as NO ₂) (as 15% O ₂), dry basis	ppmv	27.03	360
2	NMHC (as C) (at 15 % O ₂)	mg/Nm ³	34.12	100
3	PM (as C) (at 15 % O ₂)	mg/Nm ³	33.00	75
4	CO (at 15 % O ₂)	(mg/Nm ³)	48.00	150

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TEST REPORT

Table No. 25

Stack Monitoring Report

Report No. N035325023

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Deogiri Manganese & Iron Ore Mine (ML NO. 2678)
Location :	Deogiri - Work Shop
Stack ID & Capacity :	DG Set 160 KVA Doosan Light Source
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	10.02.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	11.02.2025
Lab Code :	N/25/02/3-0353
Issue date :	20.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	30
3	Stack Temperature (°C)	145
4	Velocity (m/s)	7.4
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	324
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	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	0.036	<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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TEST REPORT

Table No. 26

Stack Monitoring Report

Report No. N035425023

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Deogiri Manganese & Iron Ore Mine (ML NO. 2678)
Location :	RMK Pump House
Stack ID & Capacity :	DG Set 50 KVA water Pumping
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	10.02.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	11.02.2025
Lab Code :	N/25/02/3-0354
Issue date :	20.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	30
3	Stack Temperature (°C)	152
4	Velocity (m/s)	6.94
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	299
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	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	0.060	<0.2
2	CO	g/Kw-hr	0.108	<3.5
3	Nox +HC	g/Kw-hr	0.580	<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. N035525023

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Deogiri Manganese & Iron Ore Mine (ML NO. 2678)
Location :	CBG Weigh Bridge
Stack ID & Capacity :	DG Set 20 KVA Doosan Light Source
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	10.02.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	11.02.2025
Lab Code :	N/25/02/3-0355
Issue date :	20.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	30
3	Stack Temperature (°C)	118
4	Velocity (m/s)	7.01
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	328
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	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	0.098	<0.2
2	CO	g/Kw-hr	0.213	<3.5
3	Nox +HC	g/Kw-hr	0.870	<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. N035625023

Name of the Client : The Sandur Manganese & Iron Ores Limited				
Name of the Mine : Deogiri Manganese & Iron Ore Mine (ML NO. 2678)				
Location		: BMM Plot		
Stack ID & Capacity		: DG Set 100 KVA Doosan Light Source		
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)		
Date of Collection		: 10.02.2025		
Particulars of Sample Collected		: Emissions from stack collected through stack sample VSS1		
Date of Sample Receipt		: 11.02.2025		
Lab Code		: N/25/02/3-0356		
Issue date		: 20.02.2025		
1	Fuel Used	Diesel		
2	Ambient Temperature (°C)	30		
3	Stack Temperature (°C)	132		
4	Velocity (m/s)	13.00		
5	Stack diameter (M)	0.15		
6	Quantity of flue Gas Discharged into atmosphere (Nm³/hr)	588		
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	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	0.023	<3.5
3	Nox +HC	g/Kw-hr	0.111	<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

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Subrayanahalli Manganese & Iron Ore Mine (ML NO. 2678)
Location :	SBS -PLOT-SB HALLI
Stack ID & Capacity :	DG Set 160 KVA Mineral Processing
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	11.02.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	12.02.2025
Lab Code :	N/25/02/3-0384
Issue date :	20.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	30
3	Stack Temperature (°C)	136
4	Velocity (m/s)	7.99
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	358
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	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	0.045	<0.2
2	CO	g/Kw-hr	0.038	<3.5
3	Nox +HC	g/Kw-hr	0.206	<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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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. N038525023

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Subrayanahalli Manganese & Iron Ore Mine (ML NO. 2678)
Location :	KVH IO MINES - SB HALLI
Stack ID & Capacity :	DG Set 35 KVA Doosan Light Source
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	11.02.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	12.02.2025
Lab Code :	N/25/02/3-0385
Issue date :	20.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	28
3	Stack Temperature (°C)	122
4	Velocity (m/s)	7.04
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	327
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	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	0.083	<0.2
2	CO	g/Kw-hr	0.112	<3.5
3	Nox +HC	g/Kw-hr	0.140	<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. N038625023

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Subrayanahalli Manganese & Iron Ore Mine (ML NO. 2678)
Location :	KVH IO MINES - SB HALLI
Stack ID & Capacity :	DG Set 125 KVA Doosan Light Source
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	11.02.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	12.02.2025
Lab Code :	N/25/02/3-0386
Issue date :	20.02.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	28
3	Stack Temperature (°C)	140
4	Velocity (m/s)	8.08
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm³/hr)	358
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	0.046	<0.2
2	CO	g/Kw-hr	0.037	<3.5
3	Nox +HC	g/Kw-hr	0.089	<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. N032025025

Name of the Client :	The Sandur Manganese & Iron Ores Limited
Name of the Mine :	Kammathuru Iron Ore (KTIO) (ML No. 2678)
Location :	KTIO - Dump
Stack ID & Capacity :	DG Set 7.5 KVA Doosan Light Source
Sample Collected by :	Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Date of Collection :	21.02.2025
Particulars of Sample Collected :	Emissions from stack collected through stack sample VSS1
Date of Sample Receipt :	22.02.2025
Lab Code :	N/25/02/5-0320
Issue date :	03.03.2025

STACK DETAILS

1	Fuel Used	Diesel
2	Ambient Temperature (°C)	28
3	Stack Temperature (°C)	148
4	Velocity (m/s)	9.31
5	Stack diameter (M)	0.15
6	Quantity of flue Gas Discharged into atmosphere (Nm ³ /hr)	405
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	0.053	<0.2
2	CO	g/Kw-hr	0.323	<3.5
3	Nox +HC	g/Kw-hr	0.081	<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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