

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
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Bellary Road, Sadashivanagar
Bengaluru - 560 080
Karnataka, India

Tel: +91 80 4152 0176 - 79 / 4547 3000
Fax: +91 80 4152 0182

08/04/2026

Ref No: SMIOR/PLANT/ENV/MR/2026-27/04

To,
The Environmental Officer,
Regional Office KSPCB,
Shree Sai Sharana Plaza,
No. 71/A, 2nd Floor, Dam Road,
Hosapete, Vijayanagara- 583203

ಸ್ವೀಕೃತಿ
ಕ.ರಾ.ಮಾ.ನಿ. ಮಂಡಳಿ
ಪ್ರಾದೇಶಿಕ ಕಛೇರಿ ವಿಜಯನಗರ ಹೊಸಪೇಟೆ
ಸಂಖ್ಯೆ/ದಿನಾಂಕ: 9-4-26 ಸಹಿ

Sub: Submission of Environmental Monitoring Report **March-2026**

Ref:

- 1) CFO No. AW-329576 PCB ID 29470, Dated 02.02.2022
- 2) Amended CFO No. AW-335581 PCB ID 29470, Dated 17.01.2023.

Dear Sir,

We are herewith submitting the Environmental Monitoring Report of M/s The Sandur Manganese & Iron Ores Limited for **March 2026** for your kind perusal.

Kindly acknowledge receipt of the same and oblige.

Thanking you,

For The Sandur Manganese & Iron Ores Limited


Parvatareddy Patil
Senior General Manager- Plant



Encl: Environmental Monitoring Report **March-2026**

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

PLANT OFFICE: Metal & Ferroalloy Plant, Vyasanakere, Mariyammanahalli - 583 222, Hosapete Taluk, Vijayanagara District
Tel: +91 8394 244450 / 244335



M/s. The Sandur Manganese & Iron Ores Ltd **(Metal & Ferro Alloys Plant)**

ENVIRONMENTAL MONITORING REPORT



**Vyasanakere, Hanumanahalli Post, M.M. Halli
Hosapete-583222, Vijayanagara District,
Karnataka.**

MARCH-2026

Prepared by



GLOBAL ENVIRONMENT & MINING SERVICES LLP

NABL & MOEF CC Recognized Laboratory

(Consulting Engineers, Mine Designers, Geologists & Surveyors)

3rd main road, Basaveswara Badavane

HOSAPETE – 583201, Dist., Vijayanagara (Karnataka)

Tel : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

PREFACE

As per the conditions stipulated in the Consent for Establishment (CFE) and Consent for Operation (CFO), industries are required to monitor environmental parameters at specified frequencies and designated locations. The monitoring data must be submitted monthly to the respective State Pollution Control Board.

In line with this requirement, and as part of its commitment to environmental compliance and the health and safety of its employees and surrounding communities, **M/s. The Sandur Manganese & Iron Ores Ltd.** has engaged **M/s. Global Environment & Mining Services LLP, Hosapete**, to carry out comprehensive environmental monitoring. The scope of monitoring includes:

- Ambient Air Quality (AAQ) Monitoring
- Noise Level Monitoring
- Water /Waste Water Quality Analysis/Surface Water
- Stack Emissions Monitoring
- DG Stack Emissions/DG Noise Level Monitoring
- Fugitive Emissions
- Workzone Noise Level Monitoring

All monitoring activities were carried out using standard sampling methodologies prescribed by the Central Pollution Control Board (CPCB) and in accordance with the frequencies and parameters outlined in the CFO conditions. The monitoring reports have been compiled accordingly and are being submitted to the Pollution Control Board as per compliance requirements.

We extend our sincere thanks to the officials of **M/s. The Sandur Manganese & Iron Ores Ltd.** for their valuable coordination and support during the sampling and reporting process.

for **GLOBAL Environment & Mining Services LLP**

Place: Hosapete
Date: 02.04.2026


S. Venkatesh
(Asst. General Manager)



CONTENTS

Sl. No.	Locations	Annexure No.
ANALYSIS REPORT OF AMBIENT AIR QUALITY MONITORING		
1	A1-Near Existing AAQMS 01 (SMIORE School)	1
2	A2 - Existing Water Reservoir (Near WTP Plant)	2
3	A3-Galemmanagudi Village	3
4	A4 - Near Plant Railway Siding	4
ANALYSIS REPORT OF STACK EMISSION		
1	Stack Attached to Furnace - 3	5
2	Stack Attached to Furnace - 5	6
3	Stack Attached to WHRB-01	7
4	Stack Attached to WHRB-02	8
5	Stack Attached to Coal Crushing	9
6	Stack Attached to Coke Cutter	10
7	Stack Attached to Coke Screening & Store	11
AMBIENT NOISE LEVEL MONITORING REPORT		
1	Near Existing AAQMS 01 (SMIORE Schools)	12
2	Near Water Reservoir (WTP Plant)	
3	Galemmanagudi	
4	Vyasanakere Village	
5	Hanumana Halli	
ANALYSIS REPORT OF FUGITIVE EMISSIONS		
1	Near Battery Area (Coke Oven)	13
2	Coal Storage Area (Coke Oven)	
3	Finished goods yard in between F3 & F5	14
4	Raw Material Storage Area	
WORKZONE NOISE LEVEL MONITORING		
1	ARC Furnance-3 Area	15
2	ARC Furnance-5 Area	
3	Near WHRB -1	
4	Near WHRB-2	
5	Near Power Plant Turbine	
ANALYSIS REPORT OF DG STACK EMISSION		
1	DG Set 750 KVA (Coke Oven)	16
2	DG Set 250 KVA (VHT-2)	17
3	DG Set 250 KVA (New Bag House)	18
4	DG Set 625 KVA (Power Plant)	19
DG NOISE LEVEL MONITORING REPORT		
1	250 KVA (New Baghouse)	20
2	250 KVA ((VTH-2)	
3	750 KVA (Coke Oven)	
4	625 KVA (Power Plant)	
ANALYSIS REPORT OF STP WATER QUALITY DATA		
1	Sewage Treatment Plant (Outlet)	21
ANALYSIS REPORT OF WATER QUALITY DATA		
1	Plant Drinking RO Water	22
2	Vyasanakere Village Bore water	23
3	Galemmanagudi Village Bore water	24
4	Hanumanahalli Village Bore water	25
Analysis Report of Surface Water Quality Data		
1	Tungabhadra Dam	26
2	Plant Reservoir	27



GEMS



NABET

GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,**HOSAPETE - 583201**, Dist., Vijayanagara (Karnataka)

Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslip.in



TC-16180

**ANNEXURE-01
GEMS-LD/TF/11/01****ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA**

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Ambient Air Quality Monitoring

Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler

Month : **MARCH-2026**

Location : **A1-Near Existing AAQMS 01 (SMIORE School)**

Report Issued Date : **02.04.2026**

Report Number : **ULR-TC1618025000004473F**

RESULTS

Parameters			PM ₁₀ [µg/m ³]	PM _{2.5} [µg/m ³]	SO ₂ [µg/m ³]	NO ₂ [µg/m ³]	Ozone* (O ₃), µg/m ³	Ammonia (NH ₃) µg/m ³
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)	IS 5182 (Part 24): 2019 (RF-2024)	IS:5182: 2001 (Part-2) Sec 1:2023	IS:5182: 2006 (Part-6) (RF-2017)	IS 5182 (Part 9): 1974	IS 5182 (Part 25) 2018
Date of Sampling	Date of Sample Received	Sample Code	Result	Result	Result	Result	Result	Result
06.03.2026	07.03.2026	9562	44.42	9.83	7.86	7.52	0.00	<20.0
07.03.2026	08.03.2026	9603	48.04	10.23	9.41	9.17	0.00	<20.0
13.03.2026	14.03.2026	9833	49.42	10.58	10.99	10.09	0.00	<20.0
14.03.2026	15.03.2026	9854	52.69	12.08	8.98	9.30	0.00	<20.0
20.03.2026	21.03.2026	10023	40.75	10.03	7.47	9.35	0.00	<20.0
21.03.2026	22.03.2026	10042	37.73	15.12	12.07	13.06	0.00	<20.0
27.03.2026	28.03.2026	10218	43.00	12.78	7.71	10.52	0.00	<20.0
28.03.2026	29.03.2026	10265	40.54	13.72	10.02	10.92	0.00	<20.0
Average			40.54	11.79	9.31	9.99	0.00	<20.0
Limits for Industrial, Residential, Rural, and other Areas			100	60	80	80	180	400
			24hrs	24hrs	24hrs	24hrs	1hrs*	24hrs

Note: * Parameters monitored for period of 1 hr.

INFERENCE As per NAAQMS Standards (2009),
Report Status: - Measured Values for the above parameters are within the limit.

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

Analysed By
Samreen P
Chemist

Authorised Signatory
Venkatesh S
Asst. General Manager

Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 7 Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Thimbles After analysis Discard 7 days.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hospete jurisdiction only.
- Recognised by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



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ANNEXURE-01
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasankere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Ambient Air Quality Monitoring

Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler

Month : **MARCH-2026**

Location : **A1-Near Existing AAQMS 01 (SMIORE School)**

Report Issued Date : **02.04.2026**

Report Number : **GEMS/SMIORE/2025-26/2382**

Parameters			Lead (Pb), µg/m ³	Nickel (Ni), ng/m ³	Arsenic (As), ng/m ³	Benzo(a) Pyrene (BaP), ng/m ³	Carbon Monoxide* (CO), mg/m ³	Benzene (C6H6), µg/m ³
Reference Method			IS 5182 (Part 22): 2004(RA 2014)	IS 5182 (Part 26): 2020	GEMS /SOP/87	IS 5182 (Part XII) 2006(RA 2017)	GEMS/SOP/86	IS 5182 (Part XI) 2006(RA 2017)
Date of Sampling	Date of Sampling	Sample Code	Result	Result	Result	Result	Result	Result
06.03.2026	07.03.2026	9562	<0.01	<0.1	<0.5	<0.5	<0.01	<1.0
07.03.2026	08.03.2026	9603	<0.01	<0.1	<0.5	<0.5	<0.01	<1.0
13.03.2026	14.03.2026	9833	0.11	<0.1	<0.5	<0.5	<0.01	<1.0
14.03.2026	15.03.2026	9854	0.12	<0.1	<0.5	<0.5	0.09	<1.0
20.03.2026	21.03.2026	10023	<0.01	<0.1	<0.5	<0.5	0.11	<1.0
21.03.2026	22.03.2026	10042	<0.01	<0.1	<0.5	<0.5	<0.01	<1.0
27.03.2026	28.03.2026	10218	<0.01	<0.1	<0.5	<0.5	0.08	<1.0
28.03.2026	29.03.2026	10265	0.14	<0.1	<0.5	<0.5	0.12	<1.0
Average			0.12	<0.1	<0.5	<0.5	0.1	<1.0
Limits for Industrial, Residential, Rural, and other Areas			1.0	20	6	1	4	5
			24 Hrs.	Annual	Annual	Annual	1 Hr.	Annual

Note: * Parameters monitored for period of 1 Hrs.

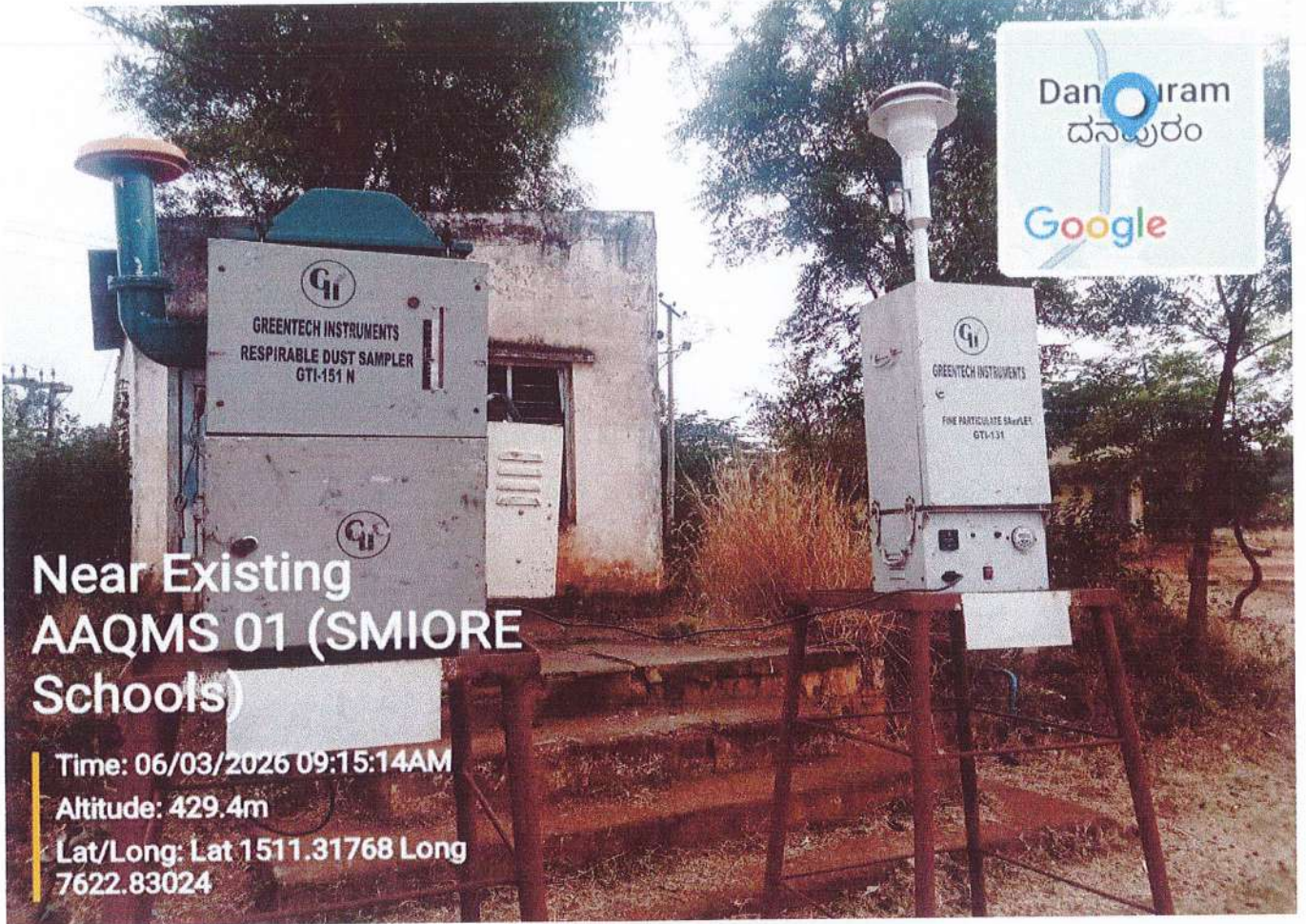
INFERENCE As per NAAQMS Standards (2009).
Report Status: - Measured Values for the above parameters are within the limit.

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

Analysed By
Samreen P
Chemist

Authorised Signatory
Venkatesh S
Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

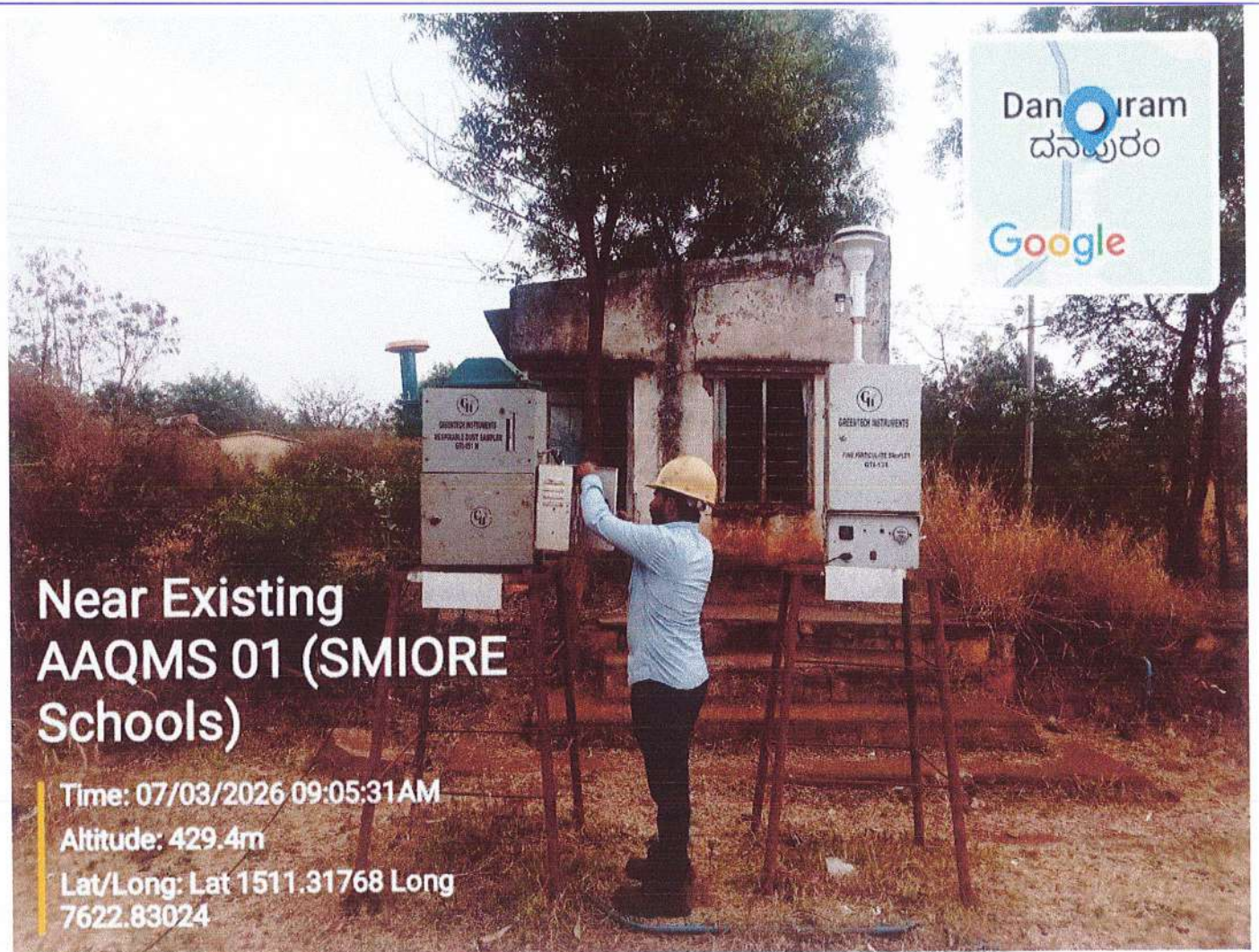


Near Existing AAQMS 01 (SMIORE Schools)

Time: 06/03/2026 09:15:14AM

Altitude: 429.4m

Lat/Long: Lat 1511.31768 Long
7622.83024

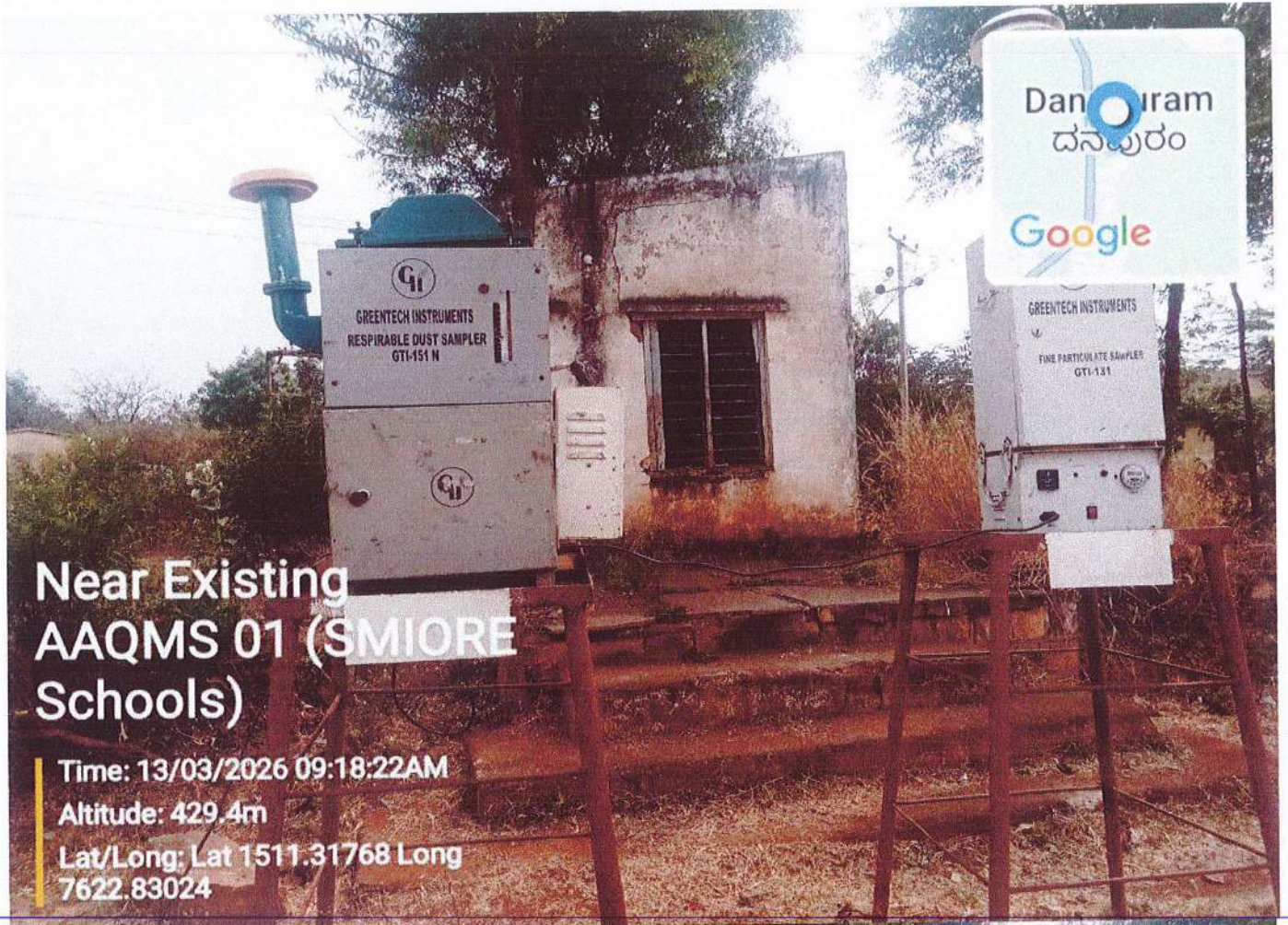


Near Existing AAQMS 01 (SMIORE Schools)

Time: 07/03/2026 09:05:31AM

Altitude: 429.4m

Lat/Long: Lat 1511.31768 Long
7622.83024

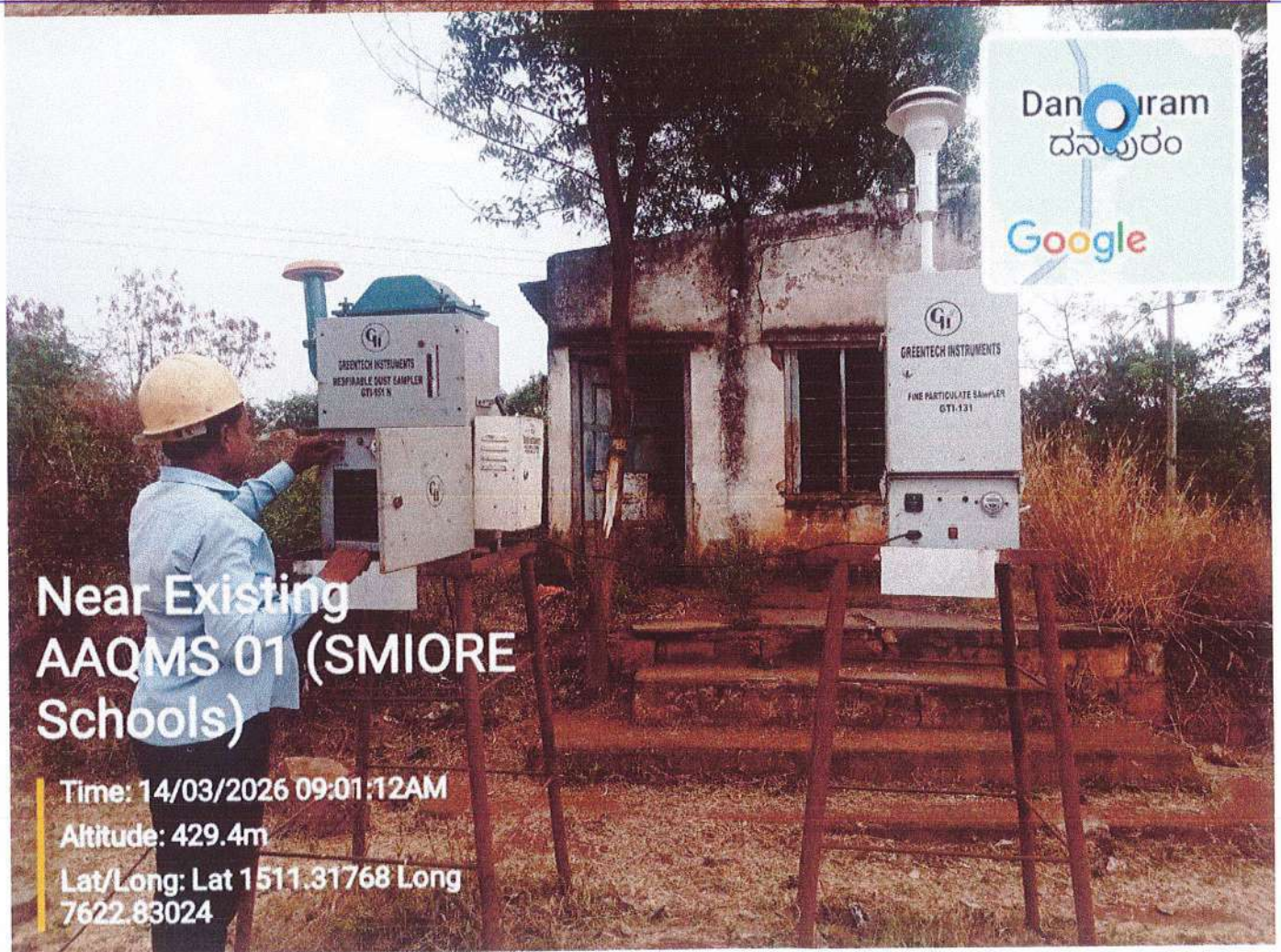


**Near Existing
AAQMS 01 (SMIORE
Schools)**

Time: 13/03/2026 09:18:22AM

Altitude: 429.4m

Lat/Long: Lat 1511.31768 Long
7622.83024

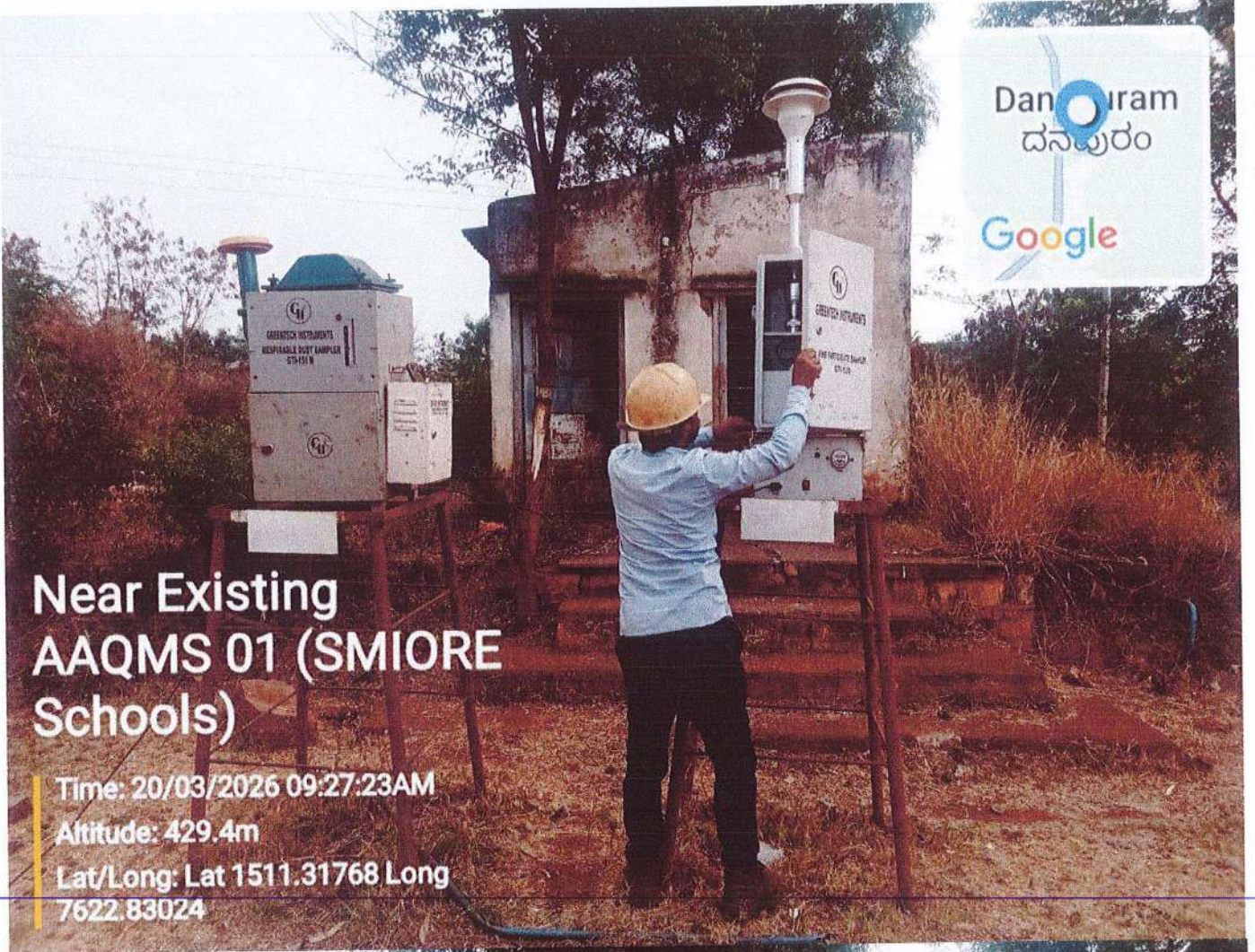


**Near Existing
AAQMS 01 (SMIORE
Schools)**

Time: 14/03/2026 09:01:12AM

Altitude: 429.4m

Lat/Long: Lat 1511.31768 Long
7622.83024

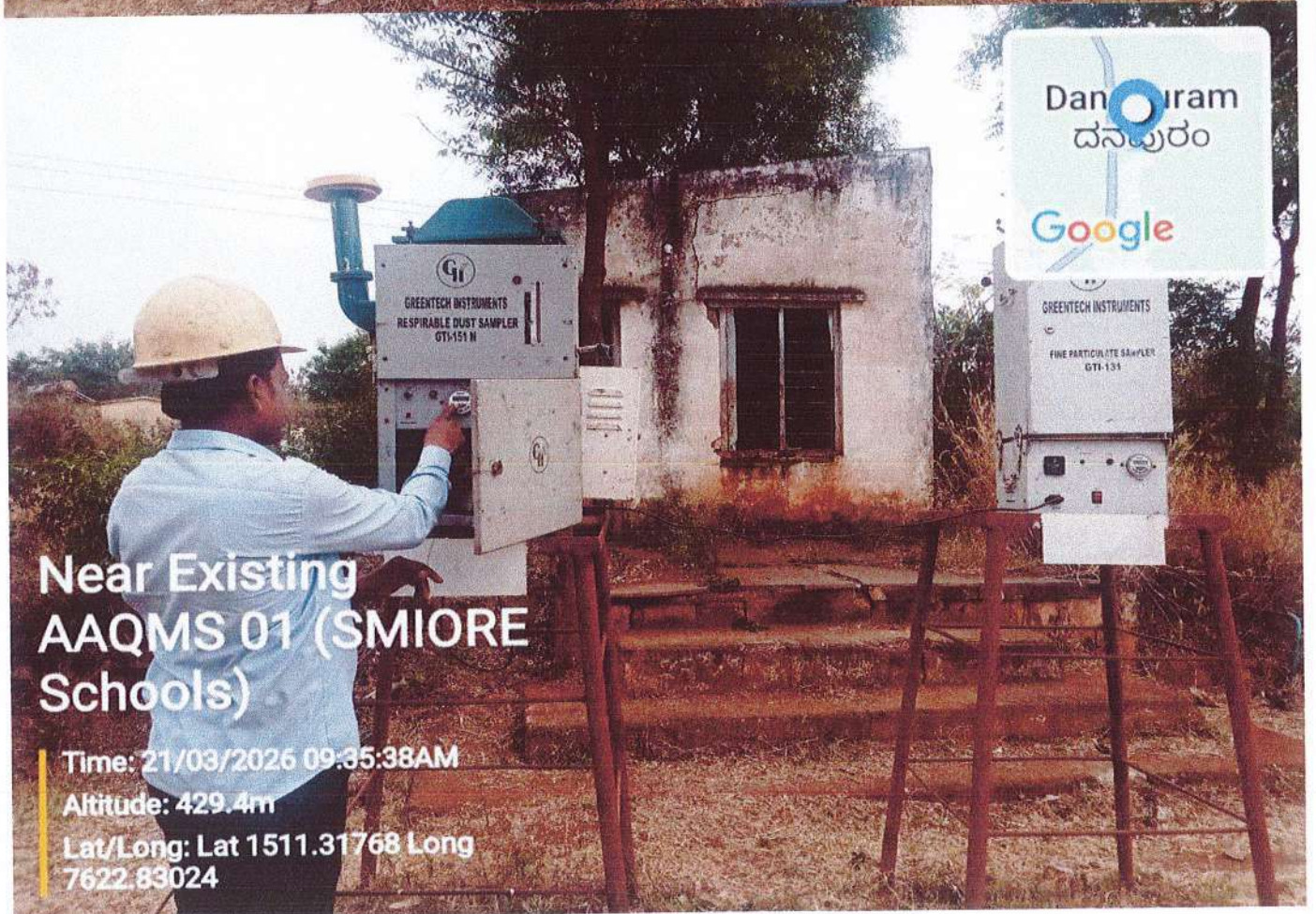


Near Existing AAQMS 01 (SMIORE Schools)

Time: 20/03/2026 09:27:23AM

Altitude: 429.4m

Lat/Long: Lat 1511.31768 Long
7622.83024



Near Existing AAQMS 01 (SMIORE Schools)

Time: 21/03/2026 09:35:38AM

Altitude: 429.4m

Lat/Long: Lat 1511.31768 Long
7622.83024



Near Existing AAQMS 01 (SMIORE Schools)

Time: 27/03/2026 08:55:39AM

Altitude: 429.4m

Lat/Long: Lat 1511.31768 Long
7622.83024



Near Existing AAQMS 01 (SMIORE Schools)

Time: 28/03/2026 09:05:31AM

Altitude: 429.4m

Lat/Long: Lat 1511.31768 Long
7622.83024



GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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Website : www.gemslip.in



TC-16180

ANNEXURE-02
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry

M/s. The Sandur Manganese & Iron Ores Ltd.

(Metal & Ferro Alloys Plant), Vyasanakere,

Hanumanahalli Village, Hospet Taluk,

Vijayanagara Dist., Karnataka

Customer Reference

: Workorder No.4200011817 Dated:20.08.2025

Sample collected by

: Global Environment & Mining Services LLP

Discipline

: Chemical

Group

: Atmospheric Pollution

Sample Type

: Ambient Air Quality Monitoring

Particulars of Sample Collected

: Respirable Dust Sampler, FPS Sampler

Month

: MARCH-2026

Location

: A2 - Existing Water Reservoir (Near WTP Plant)

Duration of Monitoring

: 24 Hour

Report Issued Date

: 02.04.2026

Report Number

: ULR-TC1618025000004474F

RESULTS

Parameters			PM ₁₀ [µg/m ³]	PM _{2.5} [µg/m ³]	SO ₂ [µg/m ³]	NO ₂ [µg/m ³]	Ozone* (O ₃). µg/m ³	Ammonia (NH ₃) µg/m ³
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)	IS 5182 (Part 24): (RF-2024)	IS:5182: 2001 (Part-2) Sec 1:2023	IS :5182: (Part-6) 2006 (RF-2017)	IS 5182 (Part 9): 1974	IS 5182 (Part 25) 2018
Date of Sampling	Date of Sample Received	Sample Code	Result	Result	Result	Result	Result	Result
06.03.2026	07.03.2026	9563	40.37	16.42	7.89	8.64	2.96	<20.0
07.03.2026	08.03.2026	9604	41.93	19.74	9.06	8.28	3.14	<20.0
13.03.2026	14.03.2026	9834	41.85	20.82	7.92	8.39	4.28	<20.0
14.03.2026	15.03.2026	9855	52.71	24.11	8.10	9.28	0.00	<20.0
20.03.2026	21.03.2026	10024	26.65	17.26	7.96	7.54	1.16	<20.0
21.03.2026	22.03.2026	10043	31.02	18.04	6.96	7.22	2.65	<20.0
27.03.2026	28.03.2026	10219	37.93	20.31	8.20	7.50	0.00	<20.0
28.03.2026	29.03.2026	10266	44.07	18.72	9.73	10.38	2.19	<20.0
Average			39.57	19.43	8.23	8.40	2.73	<20.0
Limits for Industrial, Residential, Rural, and other Areas			100	60	80	80	180	400
			24hrs	24hrs	24hrs	24hrs	1hrs*	24hrs

Note: * Parameters monitored for period of 1 hr.,

INFERENCE	As per NAAQMS Standards (2009), Report Status: - Measured Values for the above parameters are within the limit.
-----------	--

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

Samreen P
Analysed By
Samreen P
Chemist

S. Venkatesh
Authorized Signatory
Venkatesh S
Asst. General Manager
GLOBAL ENVIRONMENT & MINING SERVICES LLP

Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 7Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Thimbles After analysis Discard 7 days.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
- Recognised by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



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 e-mail : gems_hpt@yahoo.com
 Website : www.gemslp.in

ANNEXURE-02
 GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
 (Metal & Ferro Alloys Plant), Vyasanakere,
 Hanumanahalli Village, Hospet Taluk,
 Vijayanagara Dist., Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Ambient Air Quality Monitoring

Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler

Month : **MARCH-2026**

Location : **A2 - Existing Water Reservoir (Near WTP Plant)**

Report Issued Date : **02.04.2026**

Report Number : **GEMS/SMIORE/2025-26/2383**

Parameters			Lead (Pb), µg/m ³	Nickel (Ni), ng/m ³	Arsenic (As), ng/m ³	Benzo(a) Pyrene (BaP), ng/m ³	Carbon Monoxide* (CO), mg/m ³	Benzene (C6H6), µg/m ³
Reference Method			IS 5182 (Part 22): 2004(RA 2014)	IS 5182 (Part 26): 2020	GEMS /SOP/87	IS 5182 (Part XII) 2006(RA 2017)	GEMS/SOP/86	IS 5182 (Part XI) 2006(RA 2017)
Date of Sampling	Date of Sampling	Sample Code	Result	Result	Result	Result	Result	Result
06.03.2026	07.03.2026	9563	0.11	<0.1	<0.5	<0.5	<0.01	<1.0
07.03.2026	08.03.2026	9604	0.12	<0.1	<0.5	<0.5	0.1	<1.0
13.03.2026	14.03.2026	9834	0.09	<0.1	<0.5	<0.5	0.12	<1.0
14.03.2026	15.03.2026	9855	0.10	<0.1	<0.5	<0.5	<0.01	<1.0
20.03.2026	21.03.2026	10024	0.12	<0.1	<0.5	<0.5	0.11	<1.0
21.03.2026	22.03.2026	10043	0.08	<0.1	<0.5	<0.5	0.13	<1.0
27.03.2026	28.03.2026	10219	0.1	<0.1	<0.5	<0.5	0.11	<1.0
28.03.2026	29.03.2026	10266	0.11	<0.1	<0.5	<0.5	<0.01	<1.0
Average			0.10	<0.1	<0.5	<0.5	0.11	<1.0
Limits for Industrial, Residential, Rural, and other Areas			1.0	20	6	1	4	5
			24 Hrs.	Annual	Annual	Annual	1 Hr.	Annual

Note: * Parameters monitored for period of 1Hrs

INFERENCE As per NAAQMS Standards (2009).
 Report Status: - Measured Values for the above parameters are within the limit.

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

Samreen P
 Analysed By
 Samreen P
 Chemist

S. Venkatesh
 Authorised Signatory
 Venkatesh S.
 Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

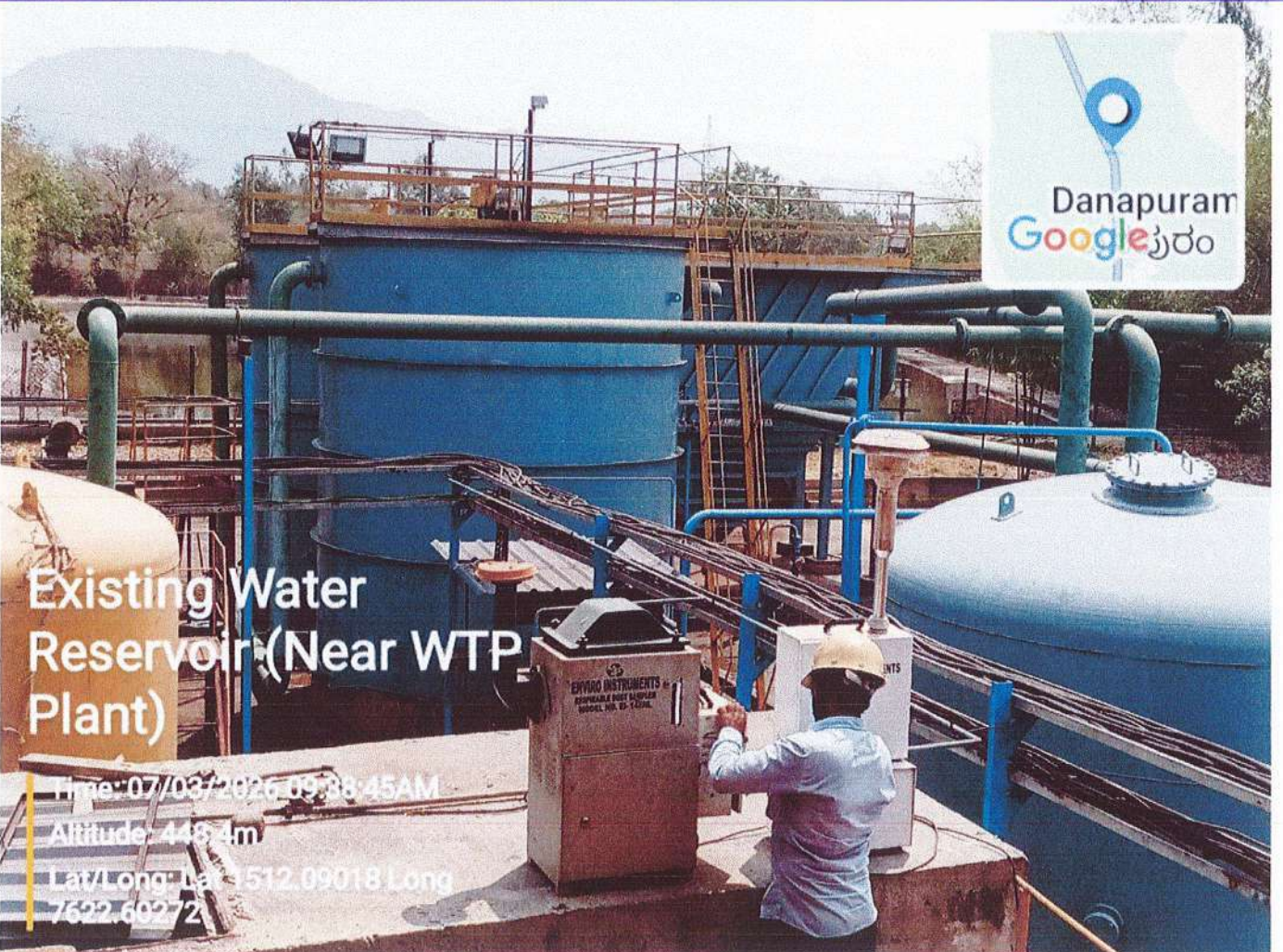


Existing Water Reservoir (Near WTP Plant)

Time: 06/03/2026 09:43:43AM

Altitude: 448.4m

Lat/Long: Lat 1512.09018 Long 7622.60272



Existing Water Reservoir (Near WTP Plant)

Time: 07/03/2026 09:38:45AM

Altitude: 448.4m

Lat/Long: Lat 1512.09018 Long 7622.60272



Existing Water Reservoir (Near WTP Plant)

Time: 13/03/2026 09:51:16AM

Altitude: 448.4m

Lat/Long: Lat 1512.09018 Long 7622.60272



Existing Water Reservoir (Near WTP Plant)

Time: 14/03/2026 09:41:34AM

Altitude: 448.4m

Lat/Long: Lat 1512.09018 Long 7622.60272



Existing Water Reservoir (Near WTP Plant)

Time: 20/03/2026 09:48:28AM

Altitude: 448.4m

Lat/Long: Lat 1512.09018 Long 7622.60272

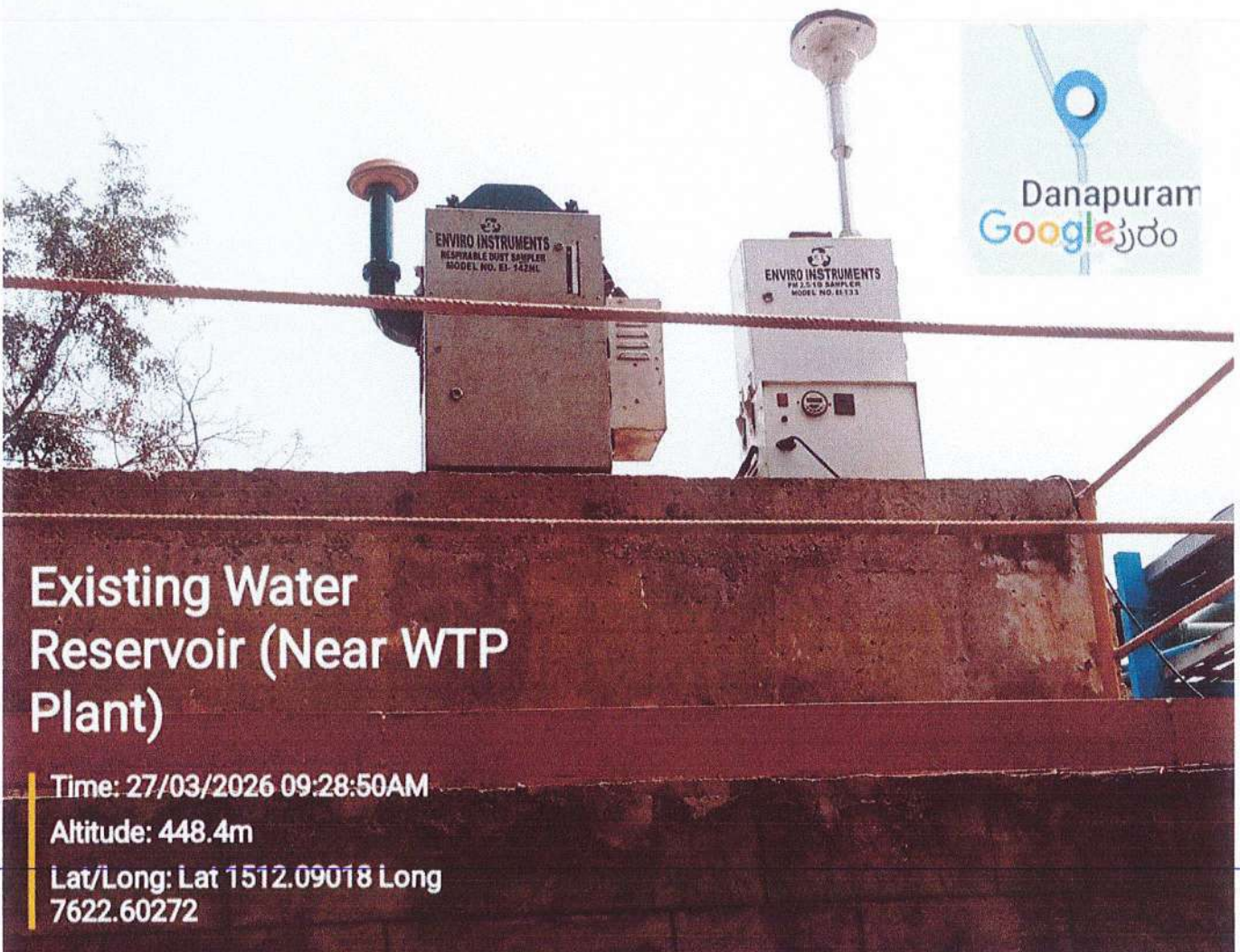


Existing Water Reservoir (Near WTP Plant)

Time: 21/03/2026 09:03:11AM

Altitude: 448.4m

Lat/Long: Lat 1512.09018 Long



Existing Water Reservoir (Near WTP Plant)

Time: 27/03/2026 09:28:50AM

Altitude: 448.4m

Lat/Long: Lat 1512.09018 Long 7622.60272



Existing water Reservoir (Near WTP Plant)

Time: 28/03/2026 09:53:41AM

Altitude: 448.4m

Lat/Long: Lat 1512.09018 Long 7622.60272



GLOBAL ENVIRONMENT & MINING SERVICES LLP

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Website : www.gemslip.in



TC-16180

ANNEXURE-03
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist, Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Ambient Air Quality Monitoring

Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler

Month : **MARCH-2026**

Location : **A3-Galemmanagudi Village**

Duration of Monitoring : 24 Hour

Report Issue Date : **02.04.2026**

Report Number : **ULR-TC1618025000004475F**

RESULTS

Parameters			PM ₁₀ [µg/m ³]	PM _{2.5} [µg/m ³]	SO ₂ [µg/m ³]	NO ₂ [µg/m ³]	Ozone* (O ₃), µg/m ³	Ammonia (NH ₃) µg/m ³
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)	IS 5182 (Part 24): 2019 (RF-2024)	IS:5182: 2001 (Part-2) Sec 1:2023	IS :5182: (Part-6) 2006 (RF-2017)	IS 5182 (Part 9): 1974	IS 5182 (Part 25) 2018
Date of Sampling	Date of Sample Received	Sample Code	Result	Result	Result	Result	Result	Result
06.03.2026	07.03.2026	9564	36.70	16.75	8.16	8.29	1.69	<20.0
07.03.2026	08.03.2026	9605	41.77	16.97	9.50	8.66	0.00	<20.0
13.03.2026	14.03.2026	9835	38.88	19.46	8.19	8.73	3.11	<20.0
14.03.2026	15.03.2026	9856	52.30	23.71	8.55	8.89	0.00	<20.0
20.03.2026	21.03.2026	10025	25.30	14.65	8.24	7.78	1.66	<20.0
21.03.2026	22.03.2026	10044	26.66	18.42	7.39	7.47	4.11	<20.0
27.03.2026	28.03.2026	10220	36.26	20.00	8.59	7.84	3.48	<20.0
28.03.2026	29.03.2026	10267	44.05	17.79	10.17	10.76	0.00	<20.0
Average			37.74	18.47	8.60	8.55	2.81	<20.0
Limits for Industrial, Residential, Rural, and other Areas			100	60	80	80	180	400
			24hrs	24hrs	24hrs	24hrs	1hrs*	24hrs

Note: * Parameters monitored for period of 1 hr.

INFERENCE	As per NAAQMS Standards (2009). Report Status: - Measured Values for the above parameters are within the limit.
-----------	--

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

Samreen P
Analysed By
Samreen P
Chemist

Venkatesh S
Authorized Signatory
Venkatesh S
Asst. General Manager

Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 7Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Thimbles After analysis Discard 7 days.
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- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
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- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



GLOBAL ENVIRONMENT & MINING SERVICES LLP

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Ph : 08394 355369

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Website : www.gemslp.in

ANNEXURE-03
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Ambient Air Quality Monitoring

Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler

Month : **MARCH-2026**

Location : **A3-Galemmanagudi Village**

Report Issued Date : **02.04.2026**

Report Number : **GEMS/SMIORE/2025-26/2351**

Parameters			Lead (Pb), µg/m ³	Nickel (Ni), ng/m ³	Arsenic (As), ng/m ³	Benzo(a) Pyrene (BaP), ng/m ³	Carbon Monoxide* (CO), mg/m ³	Benzene (C6H6), µg/m ³
Reference Method			IS 5182 (Part 22): 2004(RA 2014)	IS 5182 (Part 26): 2020	GEMS /SOP/87	IS 5182 (Part XII) 2006(RA 2017)	GEMS/SOP/86	IS 5182 (Part XI) 2006(RA 2017)
Date of Sampling	Date of Sampling	Sample Code	Result	Result	Result	Result	Result	Result
06.03.2026	07.03.2026	9564	<0.1	<0.1	<0.5	<0.5	0.11	<1.0
07.03.2026	08.03.2026	9605	<0.1	<0.1	<0.5	<0.5	0.12	<1.0
13.03.2026	14.03.2026	9835	<0.1	<0.1	<0.5	<0.5	0.11	<1.0
14.03.2026	15.03.2026	9856	<0.1	<0.1	<0.5	<0.5	0.1	<1.0
20.03.2026	21.03.2026	10025	<0.1	<0.1	<0.5	<0.5	<0.01	<1.0
21.03.2026	22.03.2026	10044	<0.1	<0.1	<0.5	<0.5	<0.01	<1.0
27.03.2026	28.03.2026	10220	<0.1	<0.1	<0.5	<0.5	<0.01	<1.0
28.03.2026	29.03.2026	10267	<0.1	<0.1	<0.5	<0.5	<0.01	<1.0
Average			<0.1	<0.1	<0.5	<0.5	0.11	<1.0
Limits for Industrial, Residential, Rural, and other Areas			1.0 24 Hrs.	20 Annual	6 Annual	1 Annual	4 1 Hr.	5 Annual

Note: * Parameters monitored for period of 1Hrs

INFERENCE	As per NAAQMS Standards (2009). Report Status: - Measured Values for the above parameters are within the limit.
-----------	--

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

Analysed By
Samreen P
Chemist

Authorised Signatory
Venkatesh S
Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey



Galammanagudi villege

Time: 06/03/2026 08:45:39AM

Altitude: 418.4m

Lat/Long: Lat 1511.54028 Long 7622.5786



Galammanagudi villege

Time: 07/03/2026 08:59:44AM

Altitude: 404.1m

Lat/Long: Lat 1511.54028 Long 7622.5786



Galammanagudi villege

Time: 13/03/2026 09:01:40AM

Altitude: 404.1m

Lat/Long: Lat 1511.54028 Long 7622.5786



Galammanagudi villege

Time: 14/03/2026 08:48:19AM

Altitude: 404.1m

Lat/Long: Lat 1511.54028 Long 7622.5786



Galamanagudi villege

Time: 20/03/2026 08:55:58AM

Altitude: 404.1m

Lat/Long: Lat 1511.54028 Long 7622.5786



Galamanagudi villege

Time: 21/03/2026 09:11:06AM

Altitude: 404.1m

Lat/Long: Lat 1511.54028 Long 7622.5786



**Galammanagudi
villege**

Time: 27/03/2026 08:39:44AM

Altitude: 418.4m

Lat/Long: Lat 1511.54028 Long
7622.5786



**Galammanagudi
villege**

Time: 28/03/2026 08:43:51AM

Altitude: 404.1m

Lat/Long: Lat 1511.54028 Long
7622.5786



GLOBAL ENVIRONMENT & MINING SERVICES LLP

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TC-16180

ANNEXURE-04
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

M/s. The Sandur Manganese & Iron Ores Ltd.

Name of the Industry

(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference

: Workorder No.4200011817 Dated:20.08.2025

Sample collected by

: Global Environment & Mining Services LLP

Discipline

: Chemical

Group

: Atmospheric Pollution

Sample Type

: Ambient Air Quality Monitoring

Particulars of Sample Collected

: Respirable Dust Sampler, FPS Sampler

Month

: MARCH-2026

Location

: A4 - Near Plant Railway Siding

Duration of Monitoring

: 24 Hour

Report Issue Date

: 02.04.2026

Report Number

: ULR-TC1618025000004476F

RESULTS

Parameters			PM ₁₀ [µg/m ³]	PM _{2.5} [µg/m ³]	SO ₂ [µg/m ³]	NO ₂ [µg/m ³]	Ozone* {O ₃ }, µg/m ³	Ammonia {NH ₃ }, µg/m ³
Reference Method			IS:5182: 2006 (Part-23) (RF-2017)	IS 5182 (Part 24): 2019 (RF-2024)	IS:5182: 2001 (Part-2) Sec 1:2023	IS :5182: (Part-6) 2006 (RF-2017)	IS 5182 (Part 9): 1974	IS 5182 (Part 25) 2018
Date of Sampling	Date of Sample Received	Sample Code	Result	Result	Result	Result	Result	Result
06.03.2026	07.03.2026	9565	51.98	25.97	7.41	9.90	3.88	<20.0
07.03.2026	08.03.2026	9606	45.60	21.90	9.29	8.70	0.00	<20.0
13.03.2026	14.03.2026	9836	41.44	20.69	9.38	10.42	1.96	<20.0
14.03.2026	15.03.2026	9857	57.82	23.31	10.99	12.08	3.58	<20.0
20.03.2026	21.03.2026	10026	37.92	19.12	9.52	9.72	5.11	<20.0
21.03.2026	22.03.2026	10045	44.45	20.74	9.27	11.10	0.00	<20.0
27.03.2026	28.03.2026	10221	37.99	21.94	7.34	7.94	4.69	<20.0
28.03.2026	29.03.2026	10268	48.53	21.97	9.42	9.07	4.18	<20.0
Average			45.72	21.96	9.08	9.87	3.9	<20.0
Limits for Industrial, Residential, Rural, and other Areas			100 24hrs	60 24hrs	80 24hrs	80 24hrs	180 1hrs*	400 24hrs

Note: * Parameters monitored for period of 1 hr.

INFERENCE As per NAAQMS Standards (2009),
Report Status: - Measured Values for the above parameters are within the limit.

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

Analysed By
Samreen P
Chemist

Authorised Signatory
Venkatesh
Asst. General Manager

Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 7 Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Thimbles After analysis Discard 7 days.
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e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

ANNEXURE-04
GEMS-LD/TF/11/01

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vysanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Ambient Air Quality Monitoring

Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler

Month : **MARCH-2026**

Location : **A4 - Near Plant Railway Siding**

Report Issued Date : **02.04.2026**

Report Number : **GEMS/SMIORE/2025-26/2385**

Parameters			Lead (Pb), µg/m ³	Nickel (Ni), ng/m ³	Arsenic (As), ng/m ³	Benzo(a) Pyrene (BaP), ng/m ²	Carbon Monoxide* (CO), mg/m ³	Benzene (C6H6), µg/m ³
Reference Method			IS 5182 (Part 22): 2004(RA 2014)	IS 5182 (Part 26): 2020	GEMS /SOP/87	IS 5182 (Part XII) 2006(RA 2017)	GEMS/SOP/86	IS 5182 (Part XI) 2006(RA 2017)
Date of Sampling	Date of Sampling	Sample Code	Result	Result	Result	Result	Result	Result
06.03.2026	07.03.2026	9565	0.11	<0.1	<0.5	<0.5	0.12	<1.0
07.03.2026	08.03.2026	9606	0.13	<0.1	<0.5	<0.5	0.11	<1.0
13.03.2026	14.03.2026	9836	0.14	<0.1	<0.5	<0.5	0.17	<1.0
14.03.2026	15.03.2026	9857	<0.01	<0.1	<0.5	<0.5	0.12	<1.0
20.03.2026	21.03.2026	10026	0.13	<0.1	<0.5	<0.5	0.11	<1.0
21.03.2026	22.03.2026	10045	0.09	<0.1	<0.5	<0.5	0.12	<1.0
27.03.2026	28.03.2026	10221	0.14	<0.1	<0.5	<0.5	0.09	<1.0
28.03.2026	29.03.2026	10268	<0.01	<0.1	<0.5	<0.5	0.13	<1.0
Average			0.12	<0.1	<0.5	<0.5	0.12	<1.0
Limits for Industrial, Residential, Rural, and other Areas			1.0	20	6	1	4	5
			24 Hrs.	Annual	Annual	Annual	1 Hr.	Annual

Note: * Parameters monitored for period of 1 Hrs.

INFERENCE

As per NAAQMS Standards (2009).

Report Status: - Measured Values for the above parameters are within the limit.

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

Samreen P
Analysed By
Samreen P
Chemist

Venkatesh S
Authorised Signatory
Venkatesh S
Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey



Near plant Railway siding

Time: 06/03/2026 09:28:31AM
Altitude: 423.2m
Lat/Long: Lat 1511.31768 Long 7622.83024



Near plant Railway siding

Time: 07/03/2026 09:17:28AM
Altitude: 423.2m
Lat/Long: Lat 1511.31768 Long 7622.83024





Near plant Railway siding

Time: 20/03/2026 09:36:27AM

Altitude: 423.2m

Lat/Long: Lat 1511.31768 Long 7622.83024



Near plant Railway siding

Time: 21/03/2026 09:49:26AM

Altitude: 423.2m

Lat/Long: Lat 1511.31768 Long 7622.83024



Near plant Railway siding

Time: 27/03/2026 09:10:38AM

Altitude: 423.2m

Lat/Long: Lat 1511.31768 Long 7622.83024



Near plant Railway siding

Time: 28/03/2026 09:29:36AM

Altitude: 423.2m

Lat/Long: Lat 1511.31768 Long 7622.83024



GLOBAL ENVIRONMENT & MINING SERVICES LLP

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 Ph : 08394 355369
 e-mail : gems_hpt@yahoo.com
 Website : www.gemslip.in



TC-16180

ANNEXURE-5 GEMS-LD/TF/10/01

Analysis Report of Stack Emission

- | | | | |
|----|------------------------------------|---|---|
| 1 | Name of the Industry | : | M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka |
| 2 | Customer Reference | : | Workorder No.4200011817 Dated:20.08.2025 |
| 3 | Sample collected by | : | Global Environment & Mining Services LLP, Hosapete |
| 4 | Particulars of sample collected | : | Stack Kit (Greentech Instruments)
SI. No: Stack Monitoring Kit/ 114-DTG-2016 |
| 5 | Instrument Details | : | Calibration Date: 25.04.2025
Calibration Due Date: 24.04.2026 |
| 6 | Discipline | : | Chemical |
| 7 | Group | : | Atmospheric Pollution |
| 8 | Sample Type | : | Stack Monitoring |
| 9 | Sampling Location | : | Stack Attached to Furnace - 3 |
| 10 | Month of Sampling | : | MARCH-2026 |
| 11 | Date of Monitoring | : | 14.03.2026 |
| 12 | Date of Sample Received | : | 16.03.2026 |
| 13 | Sample Code | : | 9865 |
| 14 | Date of Sample Analysis | : | 17.03.2026 |
| 15 | Date of Sample Analysis completion | : | 17.03.2026 |
| 16 | Report Number | : | ULR-TC1618025000004534F |
| 17 | Report Issued Date | : | 02.04.2026 |

Stack Details

- | | | | |
|---|--|-------|--|
| 1 | Fuel Used | - | |
| 2 | Stack Height (mtr) | 35 | |
| 3 | Stack Diameter (mtr) | 2.5 | |
| 4 | Cross Sectional Area in meter square (m ²) | 4.909 | |

Emission Details

Sl. No.	Parameters	Method	Unit	Result	Permissible Limit
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	32	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	112	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	8.95	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	158266	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	121818	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	82.35	150
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	12.36	-
8	Nitrogen Dioxide	IS: 11255 (Part 7): 2005 (RA 2017)	mg/Nm ³	24.2	-
9	Carbon Monoxide	GEMS/SOP/69	%	0.061	-
10	Oxygen (O ₂)	GEMS/SOP/70	%	16.01	-

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE: The Measured Values are within the limits

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

Samreen P
 Analysed By
 Samreen P
 Chemist

S. Venkatesh
 Authorised Signatory
 Venkatesh S
 Asst. General Manager

Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 7Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Thimbles After analysis Discard 7 days.
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- Recognised by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey

STACK MARCH - 2026



Stack Attached to
Furnace-3

Time: 14/03/2026 10:46:00AM

Altitude: 479.6m

Lat/Long: Lat 1511.86794 Long
7622.79946



GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)
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 e-mail : gems_hpt@yahoo.com
 Website : www.gemslp.in



TC-16180

ANNEXURE-6
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd.
1	(Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2 Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3 Sample collected by	: Global Environment & Mining Services LLP, Hosapete
4 Particulars of sample collected	: Stack Kit (Greentech Instruments) Si. No: Stack Monitoring Kit/ 114-DTG-2016
5 Instrument Details	: Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6 Discipline	: Chemical
7 Group	: Atmospheric Pollution
8 Sample Type	: Stack Monitoring
9 Sampling Location	: Stack Attached to Furnace - 5
10 Month of Sampling	: MARCH-2026
11 Date of Monitoring	: 20.03.2026
12 Date of Sample Received	: 21.03.2026
13 Sample Code	: 10030
14 Date of Sample Analysis	: 23.03.2026
15 Date of Sample Analysis completion	: 23.03.2026
16 Report Number	: ULR-TC16180250000046 14F
17 Report Issued Date	: 02.04.2026

Stack Details

1 Fuel Used	-
2 Stack Height (mtr)	35
3 Stack Diameter (mtr)	3.0
4. Cross Sectional Area in meter square (m2)	7.071

Emission Details

Sl. No.	Parameters	Method	Unit	Result	Permissible Limit
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	31	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	117	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	9.64	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	245415	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	186153	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	90.71	150
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	25.17	-
8	Nitrogen Dioxide	IS: 11255 (Part 7): 2005 (RA 2017)	mg/Nm ³	19.26	-
9	Carbon Monoxide	GEMS/SOP/69	%	0.056	-
10	Oxygen (O ₂)	GEMS/SOP/70	%	16.98	-

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

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

Samreen P
 Analysed By
 Samreen P
 Chemist

S. Venkatesh
 Authorised Signatory
 Venkatesh S
 Asst. General Manager

Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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STACK MARCH - 2026



Stack Attached to
Furnace -5

Time: 14/03/2026 12:40:00PM

Altitude: 479.6m

Lat/Long: Lat 1511.86794 Long
7622.79946



GEMS



NABET

GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,**HOSAPETE - 583201**, Dist., Vijayanagara (Karnataka)

Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in



TC-16180

ANNEXURE-7
GEMS-LD/TF/10/01**Analysis Report of Stack Emission**

Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd.
1	(Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2 Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3 Sample collected by	: Global Environment & Mining Services LLP, Hosapete
4 Particulars of sample collected	: Stack Kit (Greentech Instruments) SI. No: Stack Monitoring Kit/ 114-DTG-2016
5 Instrument Details	: Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6 Discipline	: Chemical
7 Group	: Atmospheric Pollution
8 Sample Type	: Stack Monitoring
9 Sampling Location	: Stack Attached to WHRB-01
10 Month of Sampling	: MARCH-2026
11 Date of Monitoring	: 20.03.2026
12 Date of Sample Received	: 21.03.2026
13 Sample Code	: 10030
14 Date of Sample Analysis	: 23.03.2026
15 Date of Sample Analysis completion	: 23.03.2026
16 Report Number	: ULR-TC1618025000004614F
17 Report Issued Date	: 02.04.2026

Stack Details

1 Fuel Used	-
2 Stack Height (mtr)	60
3 Stack Diameter (mtr)	4.6
4. Cross Sectional Area in meter square (m2)	16.62

Emission Details

Sl. No.	Parameters	Method	Unit	Result	Permissible Limit
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	31	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	160	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.65	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	204715	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	139981	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	37.02	50
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³	413.86	800
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³	118.15	500
9	Carbon Monoxide	GEMS/SOP/69	%	0.31	Max1%
10	Oxygen (O ₂)	GEMS/SOP/70	%	8.68	-

Note: NS- Not Specified, RA: Reaffirmed, **INFERENCE: The Measured Values are within the limits.******End of the Report****

Samreen P
Analysed By
Samreen P
Chemist

Venkatesh S
Authorized Signatory
Venkatesh S
Asst. General Manager

Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
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STACK MARCH - 2026



stack attached to
WHRB-1

Time: 20/03/2026 11:15:04AM

Altitude: 405.3m

Lat/Long: Lat 15.195405 Long
76.379848



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Ph : 08394 355369
e-mail : gems_hpt@yahoo.com
Website : www.gemslip.in



TC-16180

ANNEXURE-8
GEMS-LD/TF/10/01

Analysis Report of Stack Emission

1	Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2	Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3	Sample collected by	: Global Environment & Mining Services LLP, Hosapete
4	Particulars of sample collected	: Stack Kit (Greentech Instruments) Sl. No: Stack Monitoring Kit/ 114-DTG-2016
5	Instrument Details	: Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6	Discipline	: Chemical
7	Group	: Atmospheric Pollution
8	Sample Type	: Stack Monitoring
9	Sampling Location	: Stack Attached to WHRB-02
10	Month of Sampling	: -
11	Date of Monitoring	: -
12	Date of Sample Received	: -
13	Sample Code	: -
14	Date of Sample Analysis	: -
15	Date of Sample Analysis completion	: -
16	Report Number	: -
17	Report Issued Date	: 02.04.2026

Stack Details

1	Fuel Used	-
2	Stack Height (mtr)	60
3	Stack Diameter (mtr)	4.6
4	Cross Sectional Area in meter square (m2)	16.62

Emission Details

Sl. No.	Parameters	Method	Unit	Result	Permissible Limit
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	Shut Down	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C		-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec		-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr		-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr		50
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³		800
7	Sulphur Dioxide	IS: 11255 (Part 2): (RA 2014)	mg/Nm ³		500
8	Nitrogen Dioxide	IS:11255 (Part7): 2005 (RA 2017)	mg/Nm ³		Max1%
9	Carbon Monoxide	GEMS/SOP/69	%		-
10	Oxygen (O ₂)	GEMS/SOP/70	%		-

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE:

End of the Report

Authorised Signatory
 Venkatesh S
 Asst. General Manager

Note:
 1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
 2. Water Samples will be destroyed after 7Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Thimbles After analysis Discard 7 days.
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 6. Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



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GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in



TC-16180

ANNEXURE-09
GEMS-LD/TF/10/01**Analysis Report of Stack Emission**

Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd.
1	(Metal & Ferro Alloys Plant), Vyasankere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2 Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3 Sample collected by	: Global Environment & Mining Services LLP, Hosapete
4 Particulars of sample collected	: Stack Kit (Greentech Instruments) Sl. No: Stack Monitoring Kit/ 114-DTG-2016
5 Instrument Details	: Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6 Discipline	: Chemical
7 Group	: Atmospheric Pollution
8 Sample Type	: Stack Monitoring
9 Sampling Location	: Stack Attached to Coal Crushing
10 Month of Sampling	: MARCH-2026
11 Date of Monitoring	: 21.03.2026
12 Date of Sample Received	: 23.03.2026
13 Sample Code	: 10046
14 Date of Sample Analysis	: 24.03.2026
15 Date of Sample Analysis completion	: 24.03.2026
16 Report Number	: ULR-TC1618025000004620F
17 Report Issued Date	: 02.04.2026

Stack Details

1 Fuel Used	-
2 Stack Height (mtr)	15
3 Stack Diameter (mtr)	0.7
4. Cross Sectional Area in meter square (m2)	0.3850

Emission Details

Sl. No.	Parameters	Method	Unit	Result	Permissible Limit
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	32	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	33	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	4.60	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	6374	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	6001	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	44.84	50

Note: NS- Not Specified, RA: Reaffirmed, **INFERENCE: The Measured Values are within the limits.******End of the Report****

Samreen P
Analysed By
Samreen P
Chemist

S. Venkatesh
Authorised Signatory
Venkatesh S
Asst. General Manager
Global Environment & Mining Services
HOSAPETE

Note:

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STACK MARCH - 2026

Danapuram
ದನಪುರಂ
Google

Stack Attached
to Coal Crushing
Bagfilter

Time: 21/03/2026 10:01:35AM

Altitude: 534.8m

Lat/Long: Lat 1511.64426 Long
7622.78968



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GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslip.in



TC-16180

ANNEXURE-10
GEMS-LD/TF/10/01**Analysis Report of Stack Emission**

Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd.
1	(Metal & Ferro Alloys Plant), Vyasnakere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2 Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3 Sample collected by	: Global Environment & Mining Services LLP, Hosapete
4 Particulars of sample collected	: Stack Kit (Greentech Instruments) Sl. No: Stack Monitoring Kit/ 114-DTG-2016
5 Instrument Details	: Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6 Discipline	: Chemical
7 Group	: Atmospheric Pollution
8 Sample Type	: Stack Monitoring
9 Sampling Location	: Stack Attached to Coke Cutter
10 Month of Sampling	: MARCH-2026
11 Date of Monitoring	: 21.03.2026
12 Date of Sample Received	: 23.03.2026
13 Sample Code	: 10047
14 Date of Sample Analysis	: 24.03.2026
15 Date of Sample Analysis completion	: 24.03.2026
16 Report Number	: ULR-TC1618025000004621F
17 Report Issued Date	: 02.04.2026

Stack Details

1 Fuel Used	-
2 Stack Height (mtr)	15
3 Stack Diameter (mtr)	0.7
4. Cross Sectional Area in meter square (m2)	0.3850

Emission Details

Sl. No.	Parameters	Method	Unit	Result	Permissible Limit
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	32	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	35	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	4.57	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	6338	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	5949	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	35.56	50

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

End of the Report

Samreen P
Analysed By
Samreen P
Chemist

S. Venkatesh
Authorised Signatory
Venkatesh S
Asst. General Manager
Global Environment & Mining Services
HOSAPETE

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STACK MARCH - 2026



Stack Attached to Coke Cutter Bag filter

Time: 21/03/2026 11:46:40AM

Altitude: 534.8m

Lat/Long: Lat 1511.6426 Long
7622.78968



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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslip.in



TC-16180

ANNEXURE-11
GEMS-LD/TF/10/01**Analysis Report of Stack Emission**

	Name of the Industry	:	M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasankere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
1			
2	Customer Reference	:	Workorder No.4200011817 Dated:20.08.2025
3	Sample collected by	:	Global Environment & Mining Services LLP, Hosapete
4	Particulars of sample collected	:	Stack Kit (Greentech Instruments) Sl. No: Stack Monitoring Kit/ 114-DTG-2016
5	Instrument Details	:	Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6	Discipline	:	Chemical
7	Group	:	Atmospheric Pollution
8	Sample Type	:	Stack Monitoring
9	Sampling Location	:	Stack Attached to Coke Screening & Store
10	Month of Sampling	:	MARCH-2026
11	Date of Monitoring	:	21.03.2026
12	Date of Sample Received	:	23.03.2026
13	Sample Code	:	10048
14	Date of Sample Analysis	:	24.03.2026
15	Date of Sample Analysis completion	:	24.03.2026
16	Report Number	:	HLR-TC1618025000004622F
17	Report Issued Date	:	02.04.2026

Stack Details

1	Fuel Used	-	
2	Stack Height (mtr)	15	
3	Stack Diameter (mtr)	0.7	
4	Cross Sectional Area in meter square (m ²)	0.3850	

Emission Details

Sl. No.	Parameters	Method	Unit	Result	Permissible Limit
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	31	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	36	-
3	Velocity of Fuel Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	4.64	-
4	Gas flow rate at Stack Condition	IS-11255(Part 03) (RA 2014)	m ³ /hr	6429	-
5	Gas flow rate at NTP	IS-11255(Part 03) (RA 2014)	Nm ³ /hr	6092	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	mg/Nm ³	36.96	50

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

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

Samreen P
Analysed By
Samreen P
Chemist

S. Venkatesh
Authorised Signatory
Venkatesh
Asst. General Manager
HOSAPETE
Global Environment & Mining Services

Note:

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STACK MARCH - 2026



Stack Attached to
Coke Screening &
Store Bag filter

Time: 21/03/2025 02:56:53PM

Altitude: 393.7m

Lat/Long: Lat 1511.5268 Long
7622.65558

Darpuram

ದನಪುರಂ

Google



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(Consulting Engineers, Mine designers, Geologist & Surveyors)

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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in



TC-16180

ANNEXURE-12
GEMS-LD/TF/08/01

AMBIENT NOISE LEVEL MONITORING REPORT

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vysanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Noise Level Monitoring

Particulars of Sample Collected : Lutron: SL- 4023SD
Sl. No: Q679953

Instrument Details : Date of Calibration:16.12.2025
Calibration Due Date:15.12.2026

Month : **MARCH-2026**

Duration of the Monitoring : 24 Hrs.

Report Issue Date : **02.04.2026**

Method Adopted : IS 9989-1981 Reaffirmed 2014

Report No : **ULR-TC1618025000004479F**

Sl. No	Location	Date of Monitoring	Noise Level dB (A)							
			Day Time (06.00 Am to 10.00 Pm)			Standard	Night Time (10.00 Pm to 06.00 Am)			Standard
			Min	Max	Avg		Min	Max	Avg	
Industrial Area										
N1	Near Existing AAQMS 01 (SMIORE Schools)	06.03.2026	41.8	60.54	50.79	75	36.4	40.1	38.5	70
N2	Near Water Reservoir (WTP Plant)	07.03.2026	44.1	63.7	54.9		35.5	52.1	45.6	
Residential Area										
N3	Galemmanagudi	20.03.2026	47.2	52.1	49.2	55	36.4	42.1	38.96	45
N4	Vysanakere Village	21.03.2026	43.9	49.5	46.61		33.8	41.5	37.65	
N5	Hanumana Halli	28.03.2026	46.5	52.9	48.39		37.5	42.1	39.2	

INFERENCE

As per CPCB Standards,

Report Status: - Measured Values for the above parameters are within the limit.

End of the Report

Authorised Signatory
Venkatesh S
Asst. General Manager

NOISE: (AMBIENT STANDARDS)

Area code	Category of Area	Limit in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Area	50	40

Note:

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AMBIENT NOISE MARCH - 2026



Existing AAQMS 01 (SMIORE Schools)

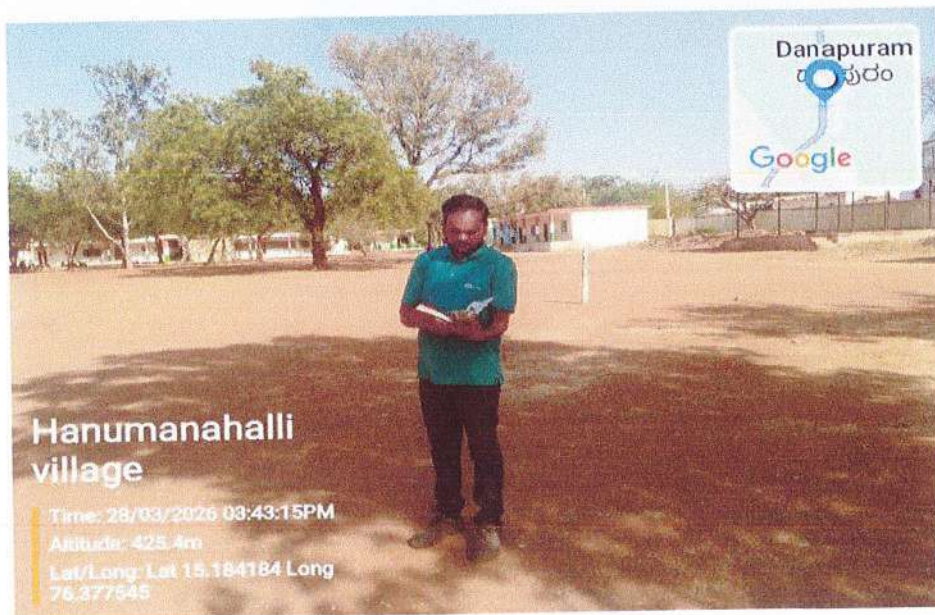
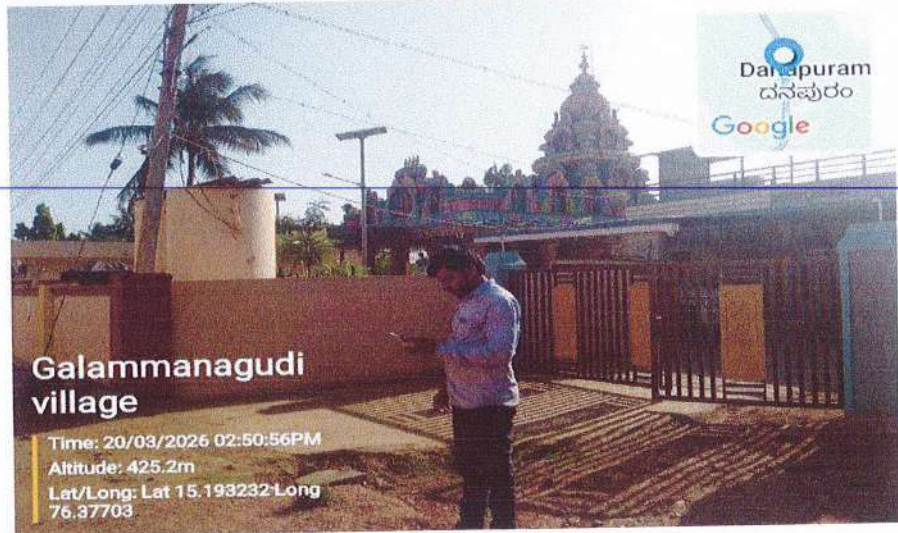
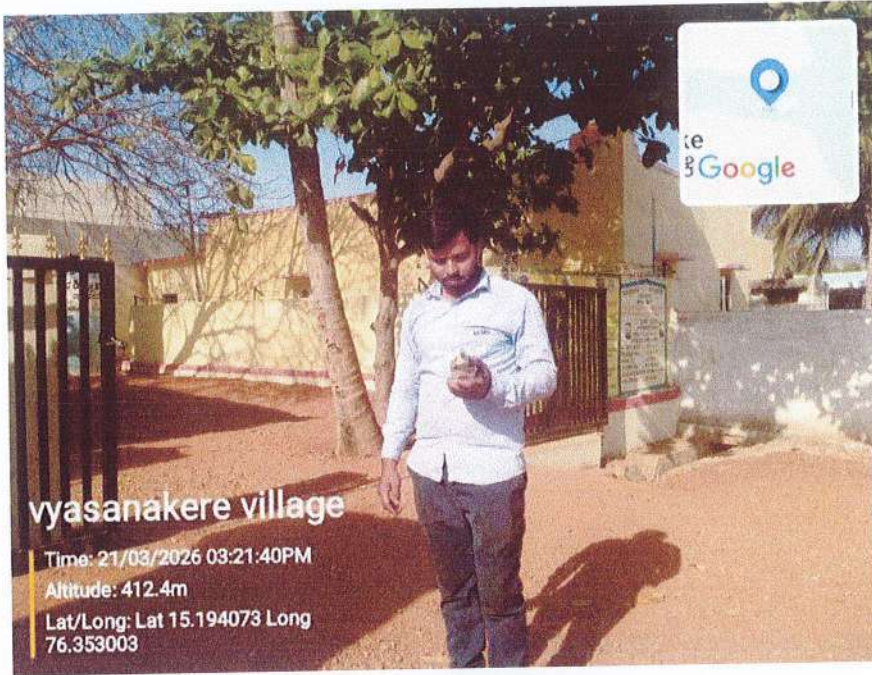
Time: 06/03/2026 10:47:45AM
Altitude: 418.5m
Lat/Long: Lat 1511.31768 Long
7622.83024



Water Reservoir (Near WTP Plant)

Time: 07/03/2026 11:54:22AM
Altitude: 440.3m
Lat/Long: Lat 1511.86794 Long
7622.79946

AMBIENT NOISE MARCH - 2026





GLOBAL ENVIRONMENT & MINING SERVICES LLP

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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

ANNEXURE-13
GEMS-LD/TF/11/01

ANALYSIS REPORT OF FUGITIVE EMISSIONS QUALITY DATA

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference : **Workorder No.4200011817 Dated:20.08.2025**

Sample collected by : **Global Environment & Mining Services LLP**

Discipline : **Chemical**

Group : **Atmospheric Pollution**

Sample Type : **Fugitive Emissions**

Particulars of Sample Collected : **High Volume Samplers**

Month : **MARCH-2026**

Duration of the Monitoring : **8 Hrs.**

Date of Analysis : **09.03.2026**

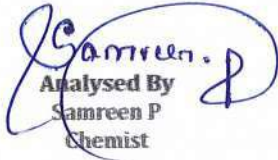
Date of Analysis Completion : **09.03.2026**

Report Issued Date : **02.04.2026**

Report Number : **GEMS/SMIORE/2025-26/2447**

Sl. No.	Location / Plant	Sample Code	Date of Sampling	Date of Sample Received	Parameters	
					SPM ($\mu\text{g}/\text{m}^3$)	Benzo(a) Pyrene (BaP), $\mu\text{g}/\text{m}^3$
Reference Test Method					IS 5182 (Part 4): 1999 RA 2014	IS 5182 (Part XII) 2006(RA 2017)
1.	Near Battery Area (Coke Oven)	9566	06.03.2026	07.03.2026	657.04	<0.0005
2.	Coal Storage Area (Coke Oven)	9567	06.03.2026	07.03.2026	884.3	<0.0005
Permissible Limits for Fugitive Emissions as per G.S.R. 277E. Dated on 31.03.2012					3000	2
					8hrs	8hrs

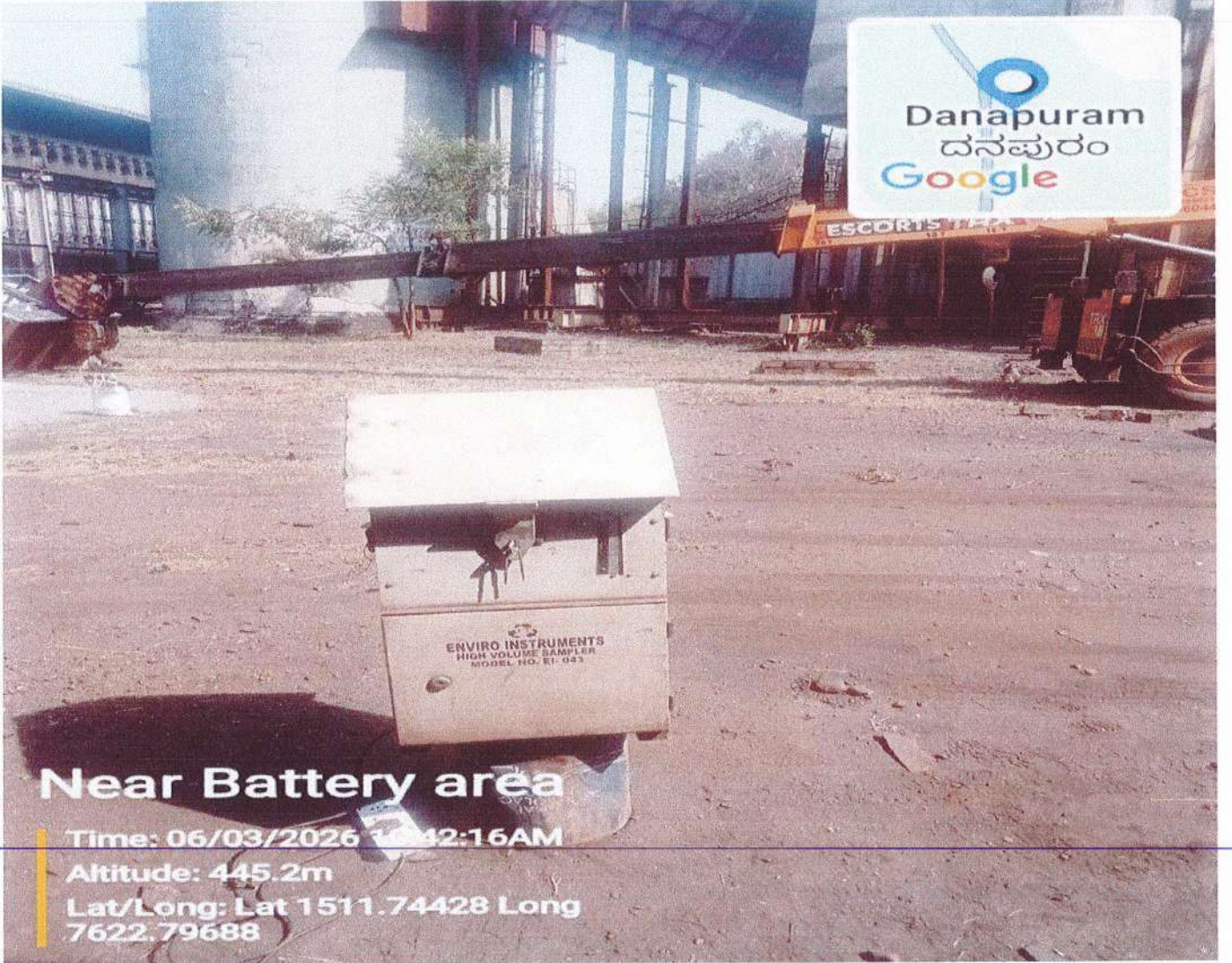
Note: SPM- Suspended Particulate matter. ($\mu\text{g}/\text{m}^3$), INFERENCE: The Measured Values are within the limits.


Analysed By
Samreen P
Chemist


Authorised Signatory
Venkatesh S
Asst. General Manager



- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey



Near Battery area

Time: 06/03/2026 10:42:16AM

Altitude: 445.2m

Lat/Long: Lat 1511.74428 Long 7622.79688



Coal Storage area

Time: 06/03/2026 10:13:31AM

Altitude: 423.9m

Lat/Long: Lat 1511.5527 Long 7622.8495



GLOBAL ENVIRONMENT & MINING SERVICES LLP

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Website : www.gemssl.in

ANNEXURE-14
GEMS-LD/TF/11/01

ANALYSIS REPORT OF FUGITIVE EMISSIONS QUALITY DATA

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasnakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Fugitive Emissions

Particulars of Sample Collected : High Volume Samplers

Month : **MARCH-2026**

Duration of the Monitoring : 8 Hrs.

Date of Analysis : **10.03.2026**

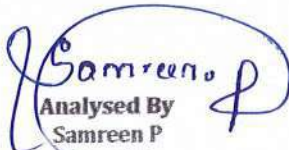
Date of Analysis Completion : **10.03.2026**

Report Issued Date : **02.04.2026**

Report Number : **GEMS/SMIOR/2025-26/2386**

Sl. No.	Location / Plant	Sample Code	Date of Sampling	Date of Sample Received	Parameters
					SPM ($\mu\text{g}/\text{m}^3$)
Reference Test Method					IS 5182 (Part 4): 1999 RA 2014
1.	Finished goods yard in between F3 & F5	9608	07.03.2026	09.03.2026	859.49
2.	Raw Material Storage Area	9609	07.03.2026	09.03.2026	618.22
Permissible Limits for Fugitive Emissions as per G.S.R. 277E. Dated on 31.03.2012					3000
					8hrs

Note: SPM- Suspended Particulate matter. ($\mu\text{g}/\text{m}^3$). **INFERENCE:** The Measured Values are within the limits.


Analysed By
Samreen P
Chemist


Authorised Signatory
Venkatesh
Asst. General Manager



- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey



Raw Martial Storage Area

Time: 07/03/2026 10:38:52AM

Altitude: 440.6m

Lat/Long: Lat 1511.86794 Long 7622.79946



Finished Goods Yard in between F3 & F5

Time: 07/03/2026 10:45:33AM

Altitude: 445.5m

Lat/Long: Lat 1511.86794 Long 7622.79946



GEMS



NABET

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e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

ANNEXURE-15
GEMS-LD/TF/08/01**WORKZONE NOISE LEVEL MONITORING REPORT**

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Noise Level Monitoring

Particulars of Sample Collected : Lutron: SL- 4023SD
Sl. No: Q679953

Instrument Details : Date of Calibration:16.12.2025
Calibration Due Date:15.12.2026

Month : **MARCH-2026**

Duration of the Monitoring : 10 Minutes

Report Issue Date : **02.04.2026**

Method Adopted : IS 9989-1981 Reaffirmed 2014

Report No : **GEMS/NOISE/2025-2026/2677**

Sl. No	Location	Date of Monitoring	Noise Level dB (A)			Standard
			Min	Max	Leq	
Industrial Area						
N1	ARC Furnance-3 Area	27.03.2026	67.8	73.0	70.60	75
N2	ARC Furnance-5 Area	27.03.2026	69.6	72.8	72.4	
N3	Near WHRB -1	27.03.2026	58.8	63.5	60.11	
N4	Near WHRB-2	27.03.2026	64.1	73.0	69.2	
N5	Near Power Plant Turbine	27.03.2026	62.6	72.2	66.2	

INFERENCE As per CPCB Standards.
Report Status: - Measured Values for the above parameters are within the limit.

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

S. Venkatesh
Authorized Signatory
Venkatesh S
Asst. General Manager

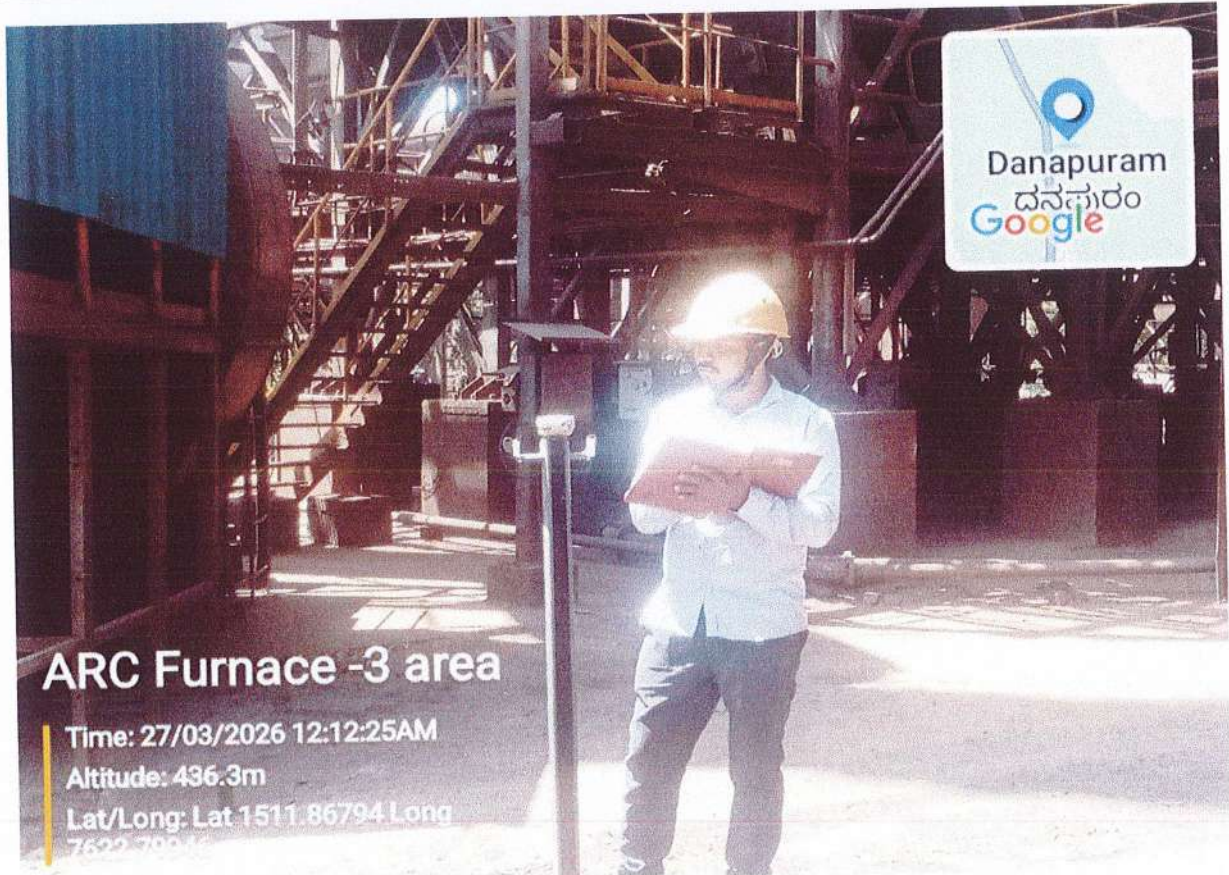
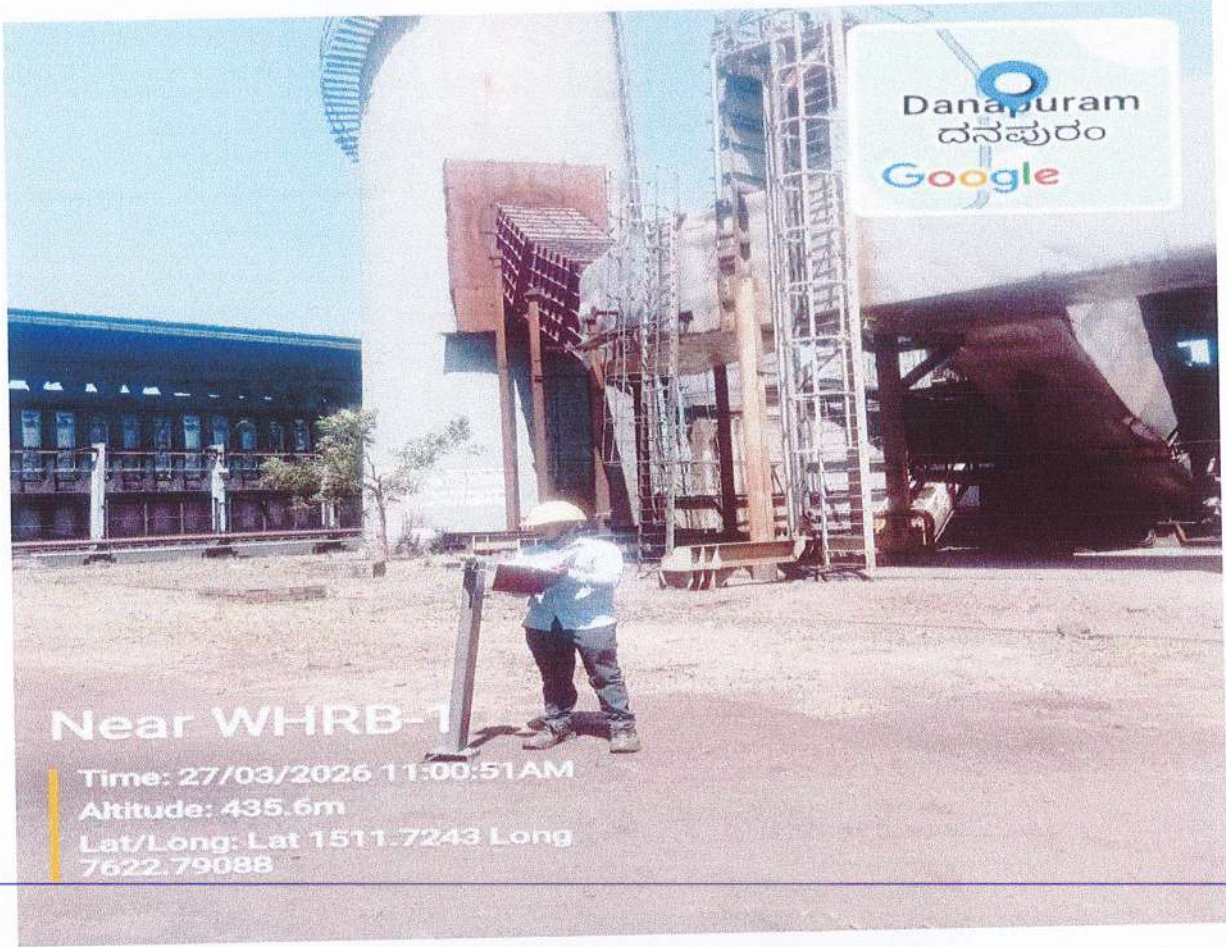
Global Environment & Mining Services
HOSPET

NOISE: (AMBIENT STANDARDS)

Area code	Category of Area	Limit in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

AMBIENT NOISE MARCH - 2026



AMBIENT NOISE MARCH - 2026



AMBIENT NOISE MARCH - 2026





GLOBAL ENVIRONMENT & MINING SERVICES LLP

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 Website : www.gemslip.in

ANNEXURE-16
 GEMS-LD/TF/10/01

Analysis Report of DG Stack Emission

Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd.
1	(Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2 Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3 Sample collected by	: Global Environment & Mining Services LLP, Hosapete
4 Particulars of sample collected	: Stack Kit (Greentech Instruments) Sl. No: Stack Monitoring Kit/ 114-DTG-2016
5 Instrument Details	: Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6 Discipline	: Chemical
7 Group	: Atmospheric Pollution
8 Sample Type	: DG Stack Monitoring
9 Sampling Location	: DG Set 750 KVA (Coke Oven)
10 Month of Sampling	: MARCH-2026
11 Date of Monitoring	: 13.03.2026
12 Date of Sample Received	: 14.03.2026
13 Sample Code	: 9838
14 Date of Sample Analysis	: 16.03.2026
15 Date of Sample Analysis completion	: 16.03.2026
16 Report Issued Date	: 02.04.2026
17 Report Number	: GEMS/DGSTACK/2025-26/2675

Stack Details

1 Fuel Used	Diesel
2 Stack Height (mtr)	15
3 Stack Diameter (mtr)	0.30

Sl. No.	Parameters	Method	Unit	Result	G.S.R. 771(E) dated 11 th Dec, 2013
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	32	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	143	-
3	Velocity of Flue Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.98	-
4	Gas flow rate at Stack Condition	IS: 11255 (Part 3) - 1985 (RA 2014)	m ³ /hr.	1769	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr.	1267	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	g/Kw-hr	0.029	<0.2
7	Sulphur Dioxide (SO ₂)	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	75.6	NS
8	Nitrogen Dioxide (NO ₂) +HC	IS: 11255 (Part 7): 2005 (RA 2017)	g/Kw-hr	0.31	<4.0
9	Carbon Monoxide (CO)	GEMS/SOP/69	g/Kw-hr	0.31	<3.5
10	O ₂ (%)	GEMS/SOP/70	%	18.11	NS

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

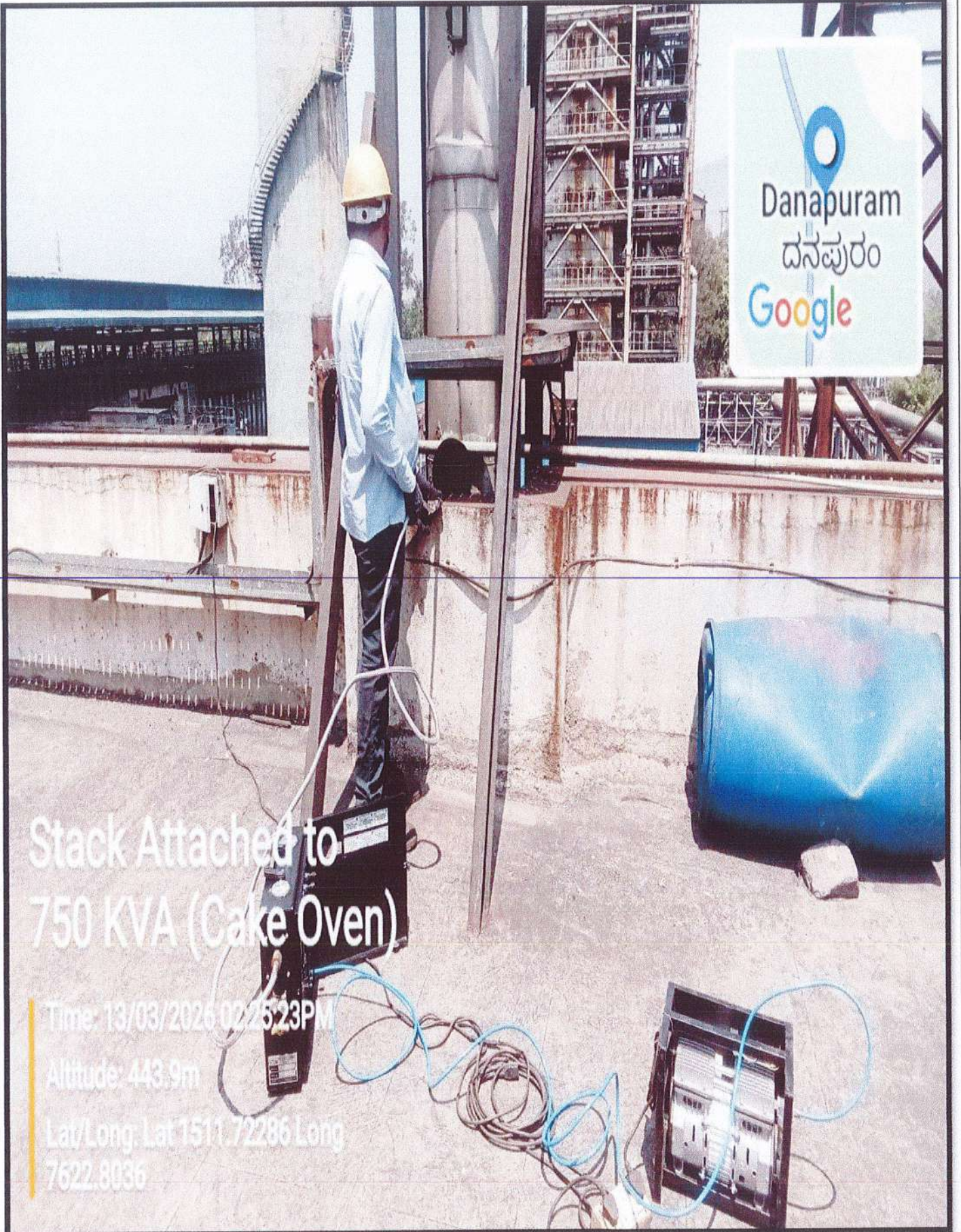
End of the Report

Analysed By
 Samreen P
 Chemist

Authorised Signatory
 Venkatesh S
 Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

STACK MARCH - 2026



Danapuram
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Google

Stack Attached to
750 KVA (Cake Oven)

Time: 13/03/2026 02:25:23PM
Altitude: 443.9m
Lat/Long: Lat 1511.72286 Long
7622.8036



GLOBAL ENVIRONMENT & MINING SERVICES LLP

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Website : www.gemslp.in

ANNEXURE-17
GEMS-LD/TF/10/01

Analysis Report of DG Stack Emission

Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd.
1	(Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist, Karnataka
2 Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3 Sample collected by	: Global Environment & Mining Services LLP, Hosapete
4 Particulars of sample collected	: Stack Kit (Greentech Instruments) Sl. No: Stack Monitoring Kit/ 114-DTG-2016
5 Instrument Details	: Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6 Discipline	: Chemical
7 Group	: Atmospheric Pollution
8 Sample Type	: DG Stack Monitoring
9 Sampling Location	: DG Set 250 KVA (VHT-2)
10 Month of Sampling	: MARCH-2026
11 Date of Monitoring	: 13.03.2026
12 Date of Sample Received	: 14.03.2026
13 Sample Code	: 9839
14 Date of Sample Analysis	: 16.03.2026
15 Date of Sample Analysis completion	: 16.03.2026
16 Report Issued Date	: 02.04.2026
17 Report Number	: GEMS/DGSTACK/2025-26/2674

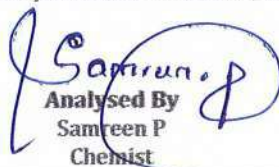
Stack Details

1 Fuel Used	Diesel
2 Stack Height (mtr)	5.0
3 Stack Diameter (mtr)	0.20

Sl. No.	Parameters	Method	Unit	Result	G.S.R. 771(E)dated 11 th Dec, 2013
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	32	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	122	-
3	Velocity of Flue Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.10	-
4	Gas flow rate at Stack Condition	IS: 11255 (Part 3) - 1985 (RA 2014)	m ³ /hr.	690	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr.	516	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	g/Kw-hr	0.11	<0.2
7	Sulphur Dioxide (SO ₂)	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	14.1	NS
8	Nitrogen Dioxide (NO ₂)	IS:11255 (Part7): 2005(RA 2017)	g/Kw-hr	0.55	<4.0
9	Carbon Monoxide (CO)	GEMS/SOP/69	g/Kw-hr	0.049	<3.5
10	O ₂ (%)	GEMS/SOP/70	%	17.11	NS

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

End of the Report

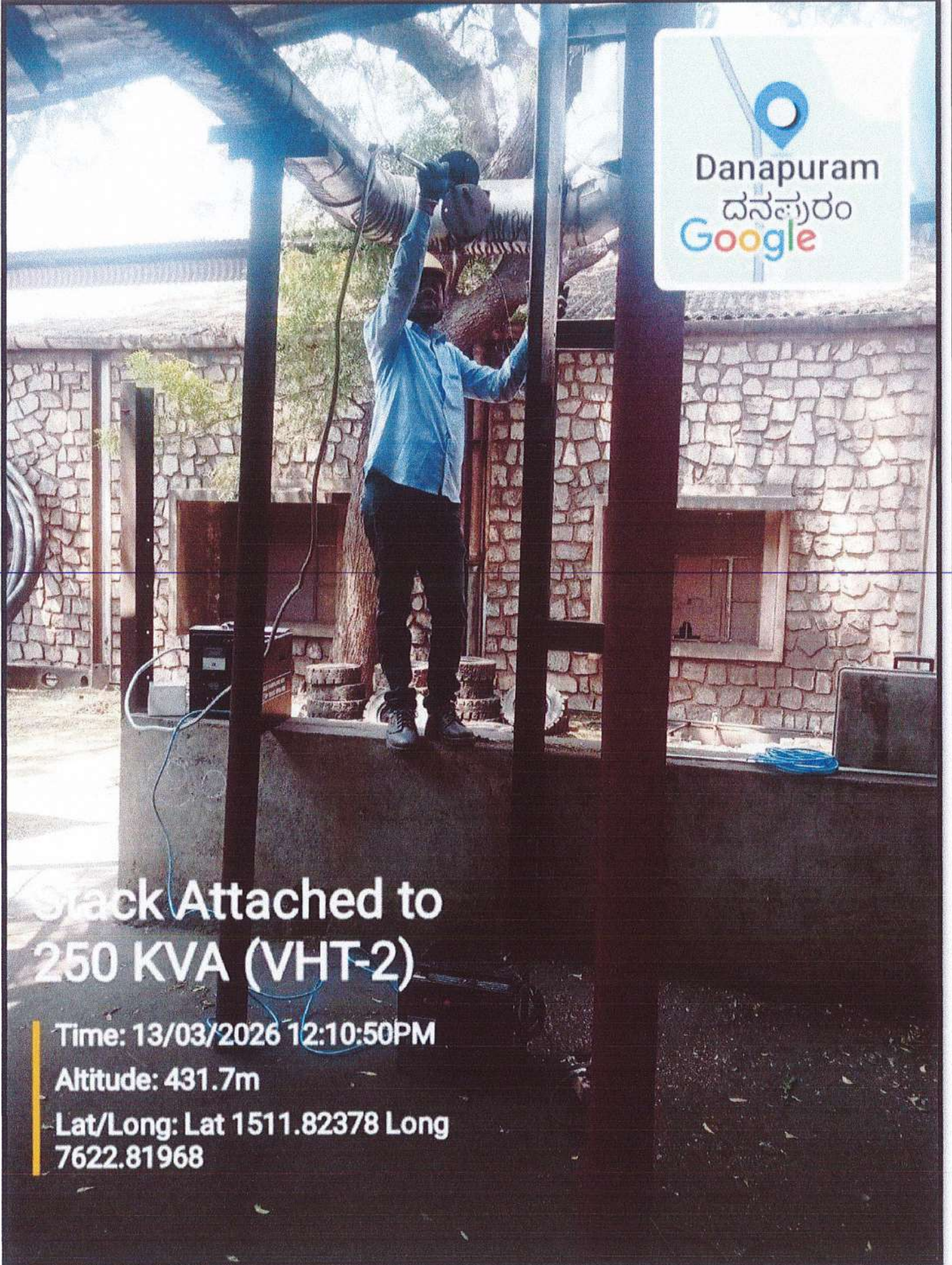

Analysed By
Samreen P
Chemist


Authorised Signatory
Venkatesh S
Asst. General Manager



- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

STACK MARCH - 2026



Danapuram
ದನಪುರಂ
Google

Stack Attached to
250 KVA (VHT-2)

Time: 13/03/2026 12:10:50PM

Altitude: 431.7m

Lat/Long: Lat 1511.82378 Long
7622.81968



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Website : www.gemslp.in

ANNEXURE-18
GEMS-LD/TF/10/01

Analysis Report of DG Stack Emission

Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd.
1	(Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2 Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3 Sample collected by	: Global Environment & Mining Services LLP, Hosapete
4 Particulars of sample collected	: Stack Kit (Greentech Instruments) Sl. No: Stack Monitoring Kit/ 114-DTG-2016
5 Instrument Details	: Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6 Discipline	: Chemical
7 Group	: Atmospheric Pollution
8 Sample Type	: DG Stack Monitoring
9 Sampling Location	: DG Set 250 KVA (New Bag House)
10 Month of Sampling	: MARCH-2026
11 Date of Monitoring	: 13.03.2026
12 Date of Sample Received	: 14.03.2026
13 Sample Code	: 9840
14 Date of Sample Analysis	: 16.03.2026
15 Date of Sample Analysis completion	: 16.03.2026
16 Report Issued Date	: 02.04.2026
17 Report Number	: GEMS/DGSTACK/2025-26/2673

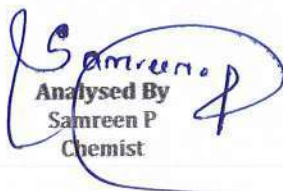
Stack Details

1	Fuel Used	Diesel
2	Stack Height (mtr)	5.0
3	Stack Diameter (mir)	0.20

Sl. No.	Parameters	Method	Unit	Result	G.S.R. 771(E) dated 11 th Dec, 2013
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	33	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	117	-
3	Velocity of Flue Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	6.74	-
4	Gas flow rate at Stack Condition	IS: 11255 (Part 3) - 1985 (RA 2014)	m ³ /hr.	763	-
5	Gas flow rate at NTP	IS-11255 (Part 03) 1985 (RA 2014)	Nm ³ /hr.	583	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	g/Kw-hr	0.09	<0.2
7	Sulphur Dioxide (SO ₂)	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	12.6	NS
8	Nitrogen Dioxide (NO ₂)	IS: 11255 (Part 7): 2005 (RA 2017)	g/Kw-hr	0.58	<4.0
9	Carbon Monoxide (CO)	GEMS/SOP/69	g/Kw-hr	0.029	<3.5
10	O ₂ (%)	GEMS/SOP/70	%	16.17	NS

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

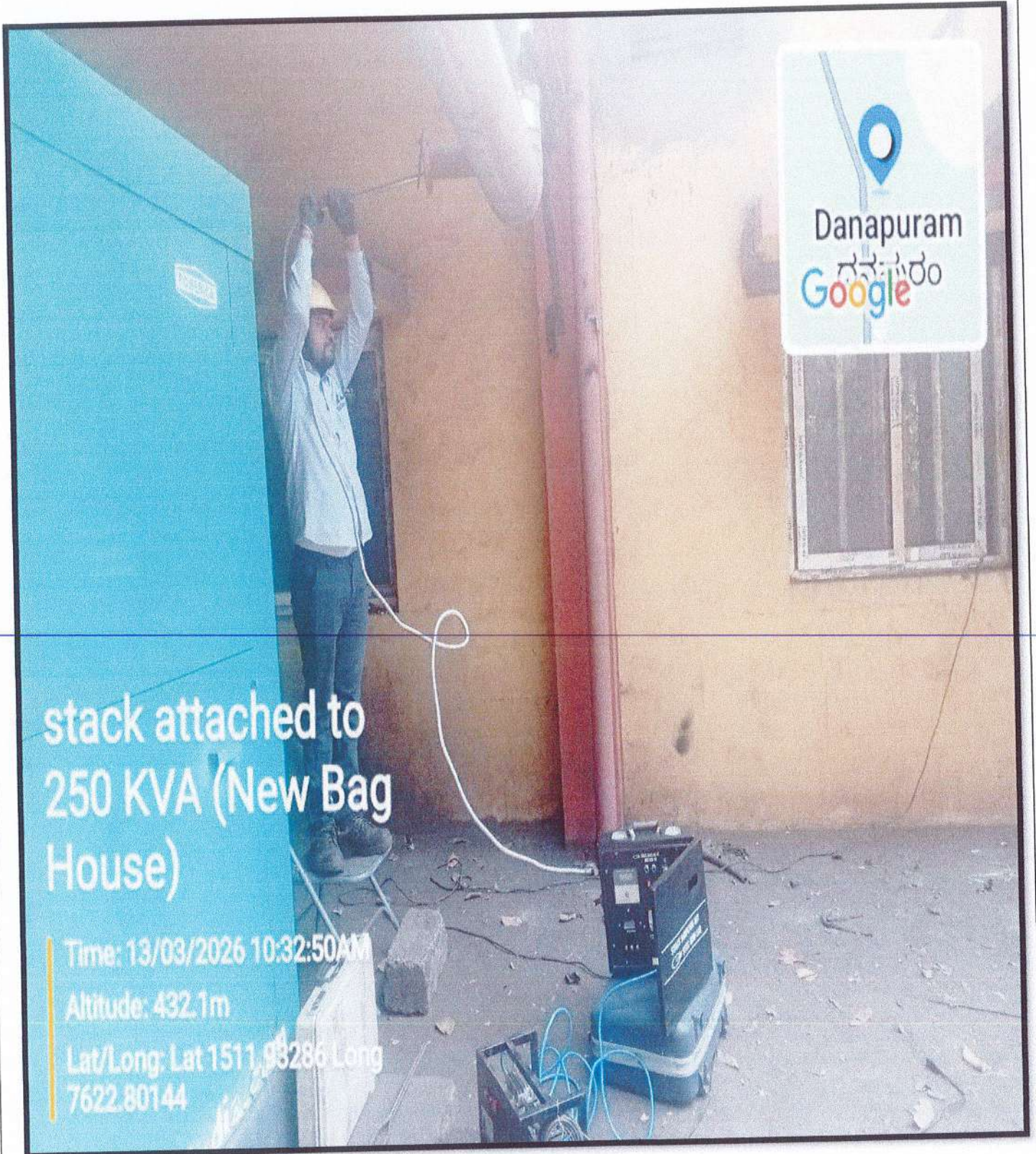
End of the Report


Analysed By
Samreen P
Chemist


Authorised Signatory
Venkatesh S
Asst. General Manager


- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

STACK MARCH - 2026





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Website : www.gemslp.in

ANNEXURE-19
GEMS-LD/TF/10/01

Analysis Report of DG Stack Emission

Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd.
1	(Metal & Ferro Alloys Plant), Vyasanakere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2 Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3 Sample collected by	: Global Environment & Mining Services LLP, Hosapete
4 Particulars of sample collected	: Stack Kit (Greentech Instruments) Sl. No: Stack Monitoring Kit/ 114-DTG-2016
5 Instrument Details	: Calibration Date: 25.04.2025 Calibration Due Date: 24.04.2026
6 Discipline	: Chemical
7 Group	: Atmospheric Pollution
8 Sample Type	: DG Stack Monitoring
9 Sampling Location	: DG Set 625 KVA (Power Plant)
10 Month of Sampling	: MARCH-2026
11 Date of Monitoring	: 13.03.2026
12 Date of Sample Received	: 14.03.2026
13 Sample Code	: 9841
14 Date of Sample Analysis	: 16.03.2026
15 Date of Sample Analysis completion	: 16.03.2026
16 Report Issued Date	: 02.04.2026
17 Report Number	: GEMS/DGSTACK/2025-26/2676

Stack Details

1	Fuel Used	Diesel
2	Stack Height (mtr)	15
3	Stack Diameter (mtr)	0.30

Sl. No.	Parameters	Method	Unit	Result	G.S.R. 771(E) dated 11 th Dec, 2013
1	Ambient Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	31	-
2	Stack Temperature	IS: 11255 (Part 1) - 1985 (RA 2014)	°C	165	-
3	Velocity of Flue Gas	IS: 11255 (Part 3) - 1985 (RA 2014)	m/sec	8.32	-
4	Gas flow rate at Stack Condition	IS: 11255 (Part 3) - 1985 (RA 2014)	m ³ /hr.	2118	-
5	Gas flow rate at NTP	IS-11255(Part 03)1985(RA 2014)	Nm ³ /hr.	1428	-
6	Particulate Matter	IS: 11255 (Part 1) - 1985 (RA 2014)	g/Kw-hr	0.16	<0.2
7	Sulphur Dioxide (SO ₂)	IS: 11255 (Part 2): 1985 (RA 2014)	mg/Nm ³	29.54	NS
8	Nitrogen Dioxide (NO ₂)	IS:11255 (Part7): 2005(RA 2017)	g/Kw-hr	0.38	<4.0
9	Carbon Monoxide (CO)	GEMS/SOP/69	g/Kw-hr	0.051	<3.5
10	O ₂ (%)	GEMS/SOP/70	%	15.18	NS

Note: NS- Not Specified, RA: Reaffirmed, INFERENCE: The Measured Values are within the limits.

End of the Report

Analysed By
Samreen P
Chemist

Authorised Signatory
Venkatesh S
Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

STACK MARCH - 2026



Stack Attached to
625 KVA (Power
Plant

Time: 13/03/2026 04:35:38PM

Altitude: 448.9m

Lat/Long: Lat 1511.6442 Long
7622.78056



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ANNEXURE-20
GEMS-LD/TF/08/01

DG NOISE LEVEL MONITORING REPORT

Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka

Customer Reference : Workorder No.4200011817 Dated:20.08.2025

Sample collected by : Global Environment & Mining Services LLP

Discipline : Chemical

Group : Atmospheric Pollution

Sample Type : Noise Level Monitoring

Particulars of Sample Collected : Lutron: SL- 4023SD
Sl. No: Q679953

Instrument Details : Date of Calibration:16.12.2025
Calibration Due Date:15.12.2026

Month : **MARCH-2026**

Duration of the Monitoring : 15 Minutes

Report Issue Date : **02.04.2026**

Method Adopted : IS 9989-1981 Reaffirmed 2014

Report No : **GEMS/NOISE/2025-2026/2677**

Sl. No	Location	Date of Monitoring	Noise Level dB (A)			CPCB Standard
			Min	Max	Leq	
Industrial Area						
1	250 KVA (New Baghouse)	13.03.2026	66.1	72.1	68.19	75
2	250 KVA (VTH-2)	13.03.2026	65.5	72.9	69.65	
3	750 KVA (Coke Oven)	13.03.2026	70.6	74.1	72.66	
4	625 KVA (Power Plant)	13.03.2026	69.9	73.6	71.9	

Note: "Noise level measurements were recorded at a distance of 1.0 meter from the Diesel Generator (DG)"

INFERENCE	As per CPCB Standards, Report Status: - Measured Values for the above parameters are within the limit.
------------------	---

End of the Report

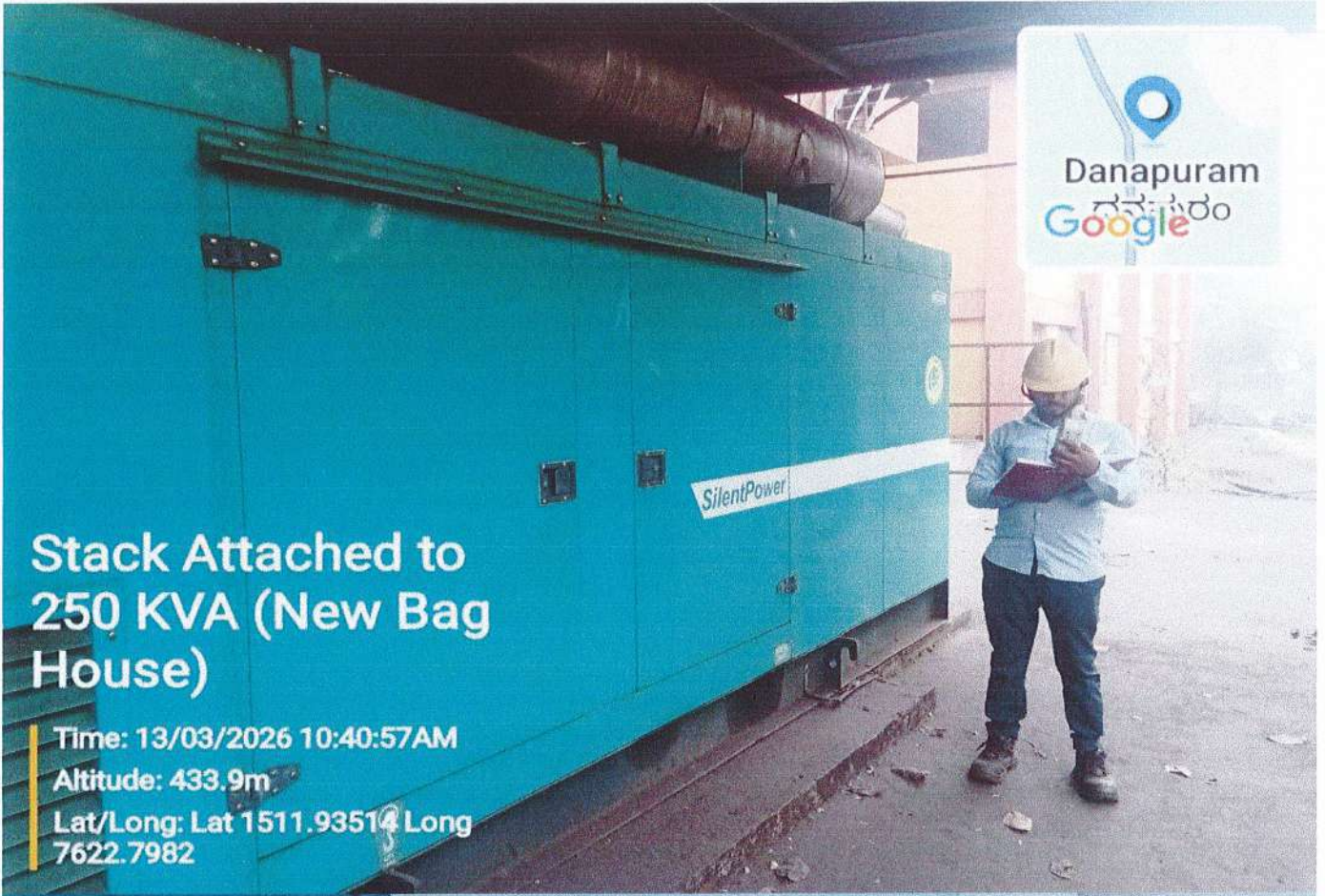
S. Venkatesh
Authorized Signatory
Venkatesh S
Asst. General Manager



NOISE: (AMBIENT STANDARDS)

Area code	Category of Area	Limit in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

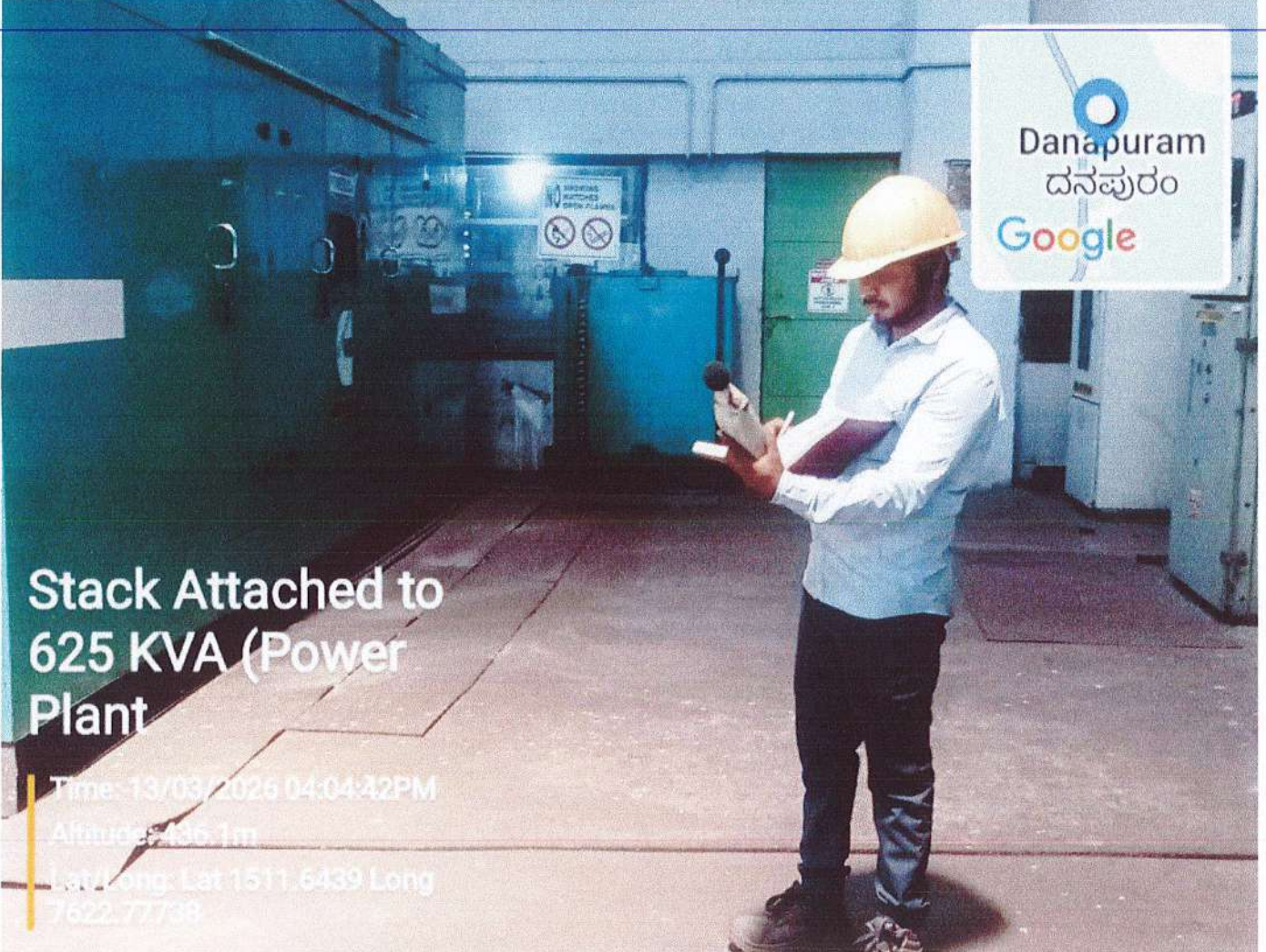


Stack Attached to 250 KVA (New Bag House)

Time: 13/03/2026 10:40:57AM

Altitude: 433.9m

Lat/Long: Lat 1511.93514 Long 7622.7982

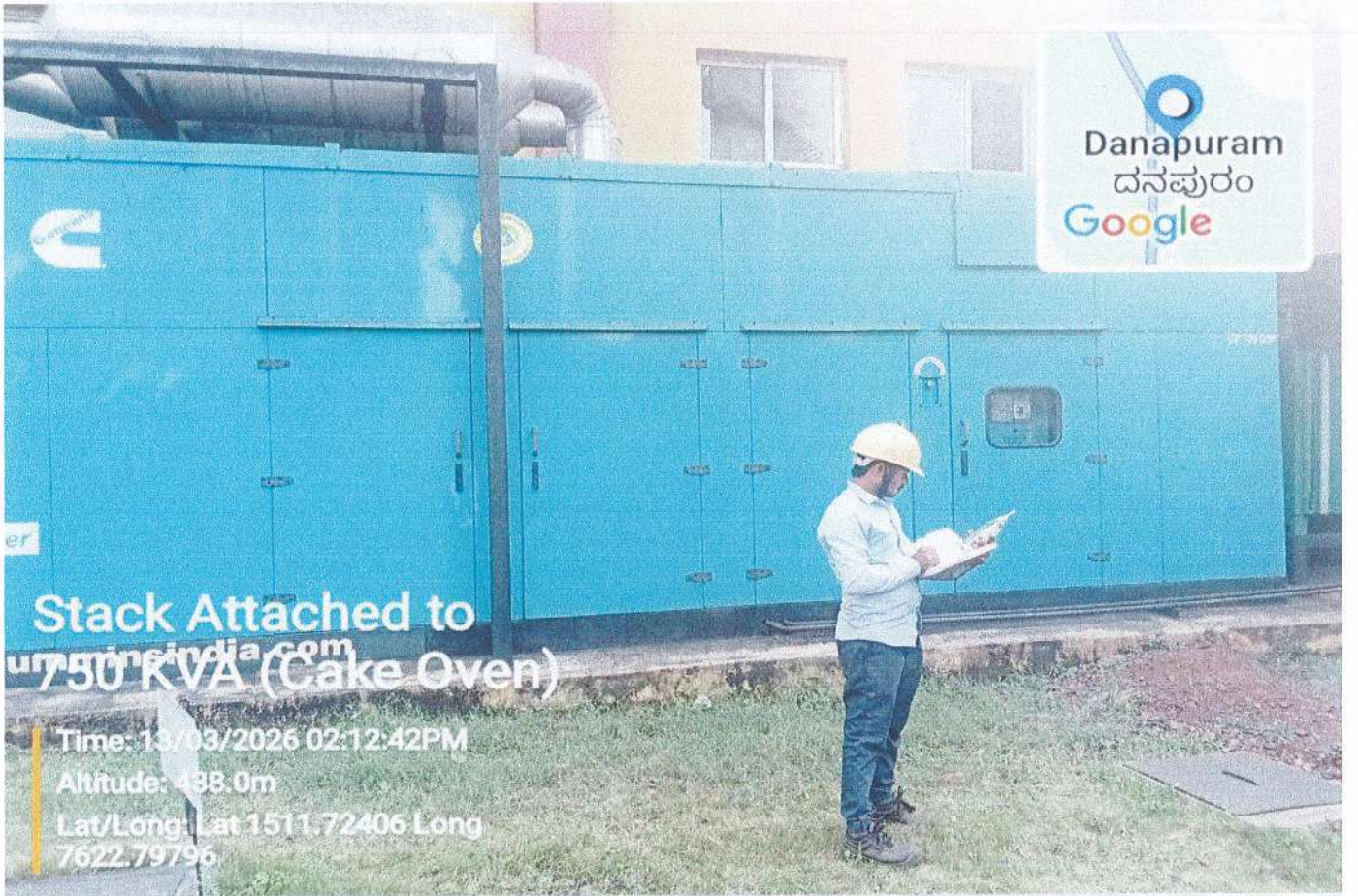


Stack Attached to 625 KVA (Power Plant)

Time: 13/03/2026 04:04:42PM

Altitude: 436.1m

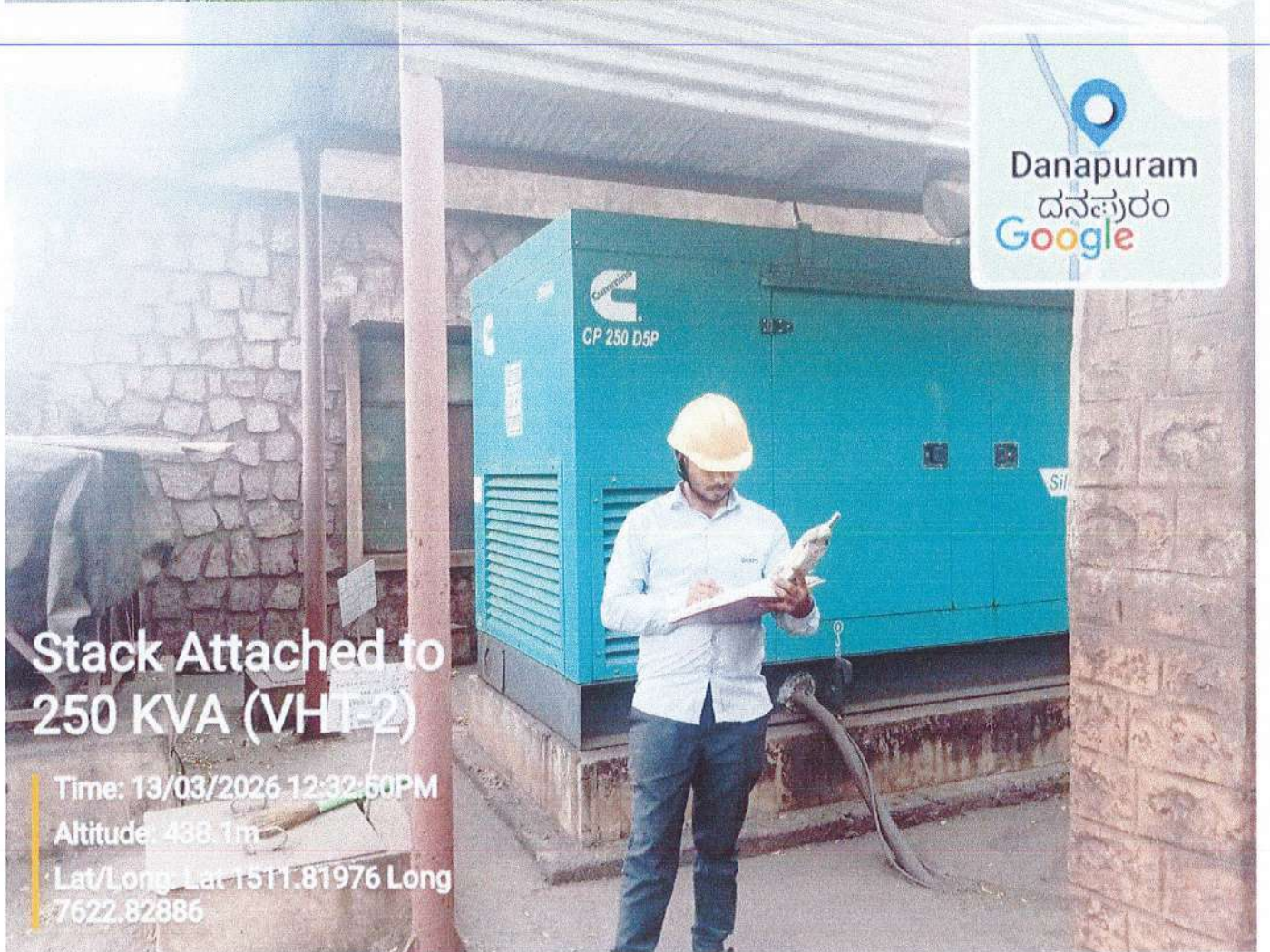
Lat/Long: Lat 1511.6439 Long 7622.77738



Danapuram
ದನಪುರಂ
Google

Stack Attached to
750 KVA (Cake Oven)

Time: 13/03/2026 02:12:42PM
Altitude: 438.0m
Lat/Long: Lat 1511.72406 Long
7622.79796



Danapuram
ದನಪುರಂ
Google

Stack Attached to
250 KVA (VHT-2)

Time: 13/03/2026 12:32:50PM
Altitude: 438.1m
Lat/Long: Lat 1511.81976 Long
7622.82886



GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)
3rd Main Road, Basaveswara Badavane,
HOSAPETE – 583201, Dist., Vijayanagara (Karnataka)
Ph : 08394 355369
e-mail : gems_hpt@yahoo.com
Website : www.gemslip.in



TC-16180

ANNEXURE-21
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- 1 Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasankere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka
- 2 Customer Reference : Workorder No.4200011817 Dated:20.08.2025
- 3 Sample collected by : Global Environment & Mining Services LLP
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : **Sewage Treatment Plant (Outlet)**
- 9 Sample Code : **9858**
- 10 Date of Sampling : **14.03.2026**
- 11 Sample Received : **16.03.2026**
- 12 Date of Analysis : **19.03.2026**
- 13 Date of Analysis Completion : **19.03.2026**
- 14 Report Issue Date : **02.04.2026**
- 15 Report Number : **ULR-TC1618025000004528F**

Sl. No.	Parameters	Protocol	Unit	Results	As per KSPCB Std
1.	pH	APHA 24th Edition 4500 H + B: 2023	-	7.54	6.5 to 9.0
2.	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	14.0	<20
3.	Biochemical Oxygen Demand as BOD (3 days at 27°C)	IS 3025 PART 44: 2023	mg/L	4.9	<10
4.	Chemical Oxygen Demand as COD	APHA 24th Edition 5220 B: 2023	mg/L	30.85	<50

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit.
End of the Report

Analysed By
Samreen P
Chemist

Authorized Signatory
Venkatesh
Asst. General Manager

Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 7Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & T himbles After analysis Discard 7 days.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
4. Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
5. Recognised by Ministry of Environment, Forest, and Climate Change for Laboratory
6. Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



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Website : www.gemslp.in

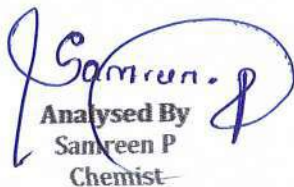
ANNEXURE-21
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- 1 Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasankere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka
- 2 Customer Reference : Workorder No.4200011817 Dated:20.08.2025
- 3 Sample collected by : Global Environment & Mining Services LLP
- 4 Particulars of sample collected : Composite Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Pollution & Environment
- 8 Sample Type : **Sewage Treatment Plant (Outlet)**
- 9 Sample Code : **9858**
- 10 Date of Sampling : 14.03.2026
- 11 Sample Received : 16.03.2026
- 12 Date of Analysis : 19.03.2026
- 13 Date of Analysis Completion : 19.03.2026
14. Report Issue Date : **02.04.2026**
- 15 Report Number : **GEMS/SMIORE/STP/2025-26/4528**

Sl. No.	Parameters	Protocol	Unit	Results	As per KSPCB Std
5	Ammonical nitrogen as N	IS:3025 (part 34)-1988, RA-2023	mg/L	1.96	<5
6	Total Nitrogen as N	IS:3025 (part 34)-1988, RA-2023	mg/L	6.85	<10
7	Fecal coliform	APHA 24th Edition 9222 B :2023	MPN/ 100ml	14	Less than 100

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit.


Analysed By
Samreen P
Chemist


Authorized Signatory
Venkatesh S
Asst. General Manager


- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

Water Quality march - 2026



STP OUT LET

Time: 14/03/2026 02:29:54PM

Altitude: 459.0m

Lat/Long: Lat 1511.63718 Long
7622.79226



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Website : www.gemslp.in



TC-16180

ANNEXURE-22
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- | | | |
|----|---------------------------------|--|
| 1 | Name of the Industry | : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant), Vyasankere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka |
| 2 | Customer Reference | : Workorder No.4200011817 Dated:20.08.2025 |
| 3 | Sample collected by | : Global Environment & Mining Services LLP |
| 4 | Particulars of sample collected | : Grab Sampling |
| 5 | Sampling Procedure | : GEMS-LD/SOP/32 |
| 6 | Discipline | : Chemical |
| 7 | Group | : Water |
| 8 | Sample Type | : RO Water |
| 9 | Sample Location | : Plant Drinking Water |
| 10 | Sample Code | : 9859 |
| 11 | Date of Sampling | : 14.03.2026 |
| 12 | Sample Received | : 16.03.2026 |
| 13 | Date of Analysis | : 19.03.2026 |
| 14 | Date of Analysis Completion | : 19.03.2026 |
| 15 | Report Issue Date | : 02.04.2026 |
| 16 | Report Number | : ULR-TC1618025000004529F |

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
PHYSICAL						
1.	pH	APHA 24th Edition 4500 H +B: 2023	-	7.47	6.5 to 8.5	NR
2	Conductivity	APHA 24th Edition 2510 A: 2023	µS/cm	140	-	-
3	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	82.0	500max	2000 max
4	Turbidity (NTU)	APHA 24th Edition 2130 B: 2023	NTU	0.1	1 max	5max
5	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	0.00	-	-
CHEMICAL						
6	Sodium as Na	APHA 24th Edition 3500 Na B: 2023	mg/L	12.81	-	-
7	Potassium as K	APHA 24th Edition 3500 K B: 2023	mg/L	11.19	-	-
8	Calcium as Ca	APHA 24th Edition 3500 Ca B: 2023	mg/L	5.6	75max	200max
9	Magnesium as Mg	APHA 24th Edition 3500 Mg B: 2023	mg/L	2.17	30max	100max
10	Total Hardness as CaCO3	APHA 24th Edition 2340 C: 2023	mg/L	22.00	200max	600max
11	Chloride as Cl	APHA 24th Edition 4500 Cl B: 2023	mg/L	10.36	250max	1000 max
12	Fluoride as F	APHA 24th Edition 4500 F D: 2023	mg/L	<0.1	1 max	1.5 max
13	Sulphate as SO4	APHA 24th Edition 4500 SO4 E: 2023	mg/L	7.88	200max	400max
14	Nitrate as NO3	APHA 24th Edition 4500 NO3 E: 2023	mg/L	1.86	45max	NR
15	Total Alkalinity as CaCO3	APHA 24th Edition 2320 B: 2023	mg/L	19.62	200max	600max
16	Total Iron as Fe	APHA 24th Edition 3500 Fe B: 2023	mg/L	<0.01	0.30max	NR
17	Boron as B	APHA 24th Edition 4500 BB: 2023	mg/L	<0.01	0.5max	1.0max

Note: INFERENCE: The Measured values are within the Limit.

Analysed By
Samreen P
Chemist

Authorised Signatory
Venkatesh
Asst. General Manager

Note:

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 7Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Tumbles After analysis Discard 7 days.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
- Recognised by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



GEMS



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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslip.in

ANNEXURE-22
GEMS-LD/TF/23/01**Analysis Report of Water Quality Data**

- 1 Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist, Karnataka
- 2 Customer Reference : Workorder No.4200011817 Dated:20.08.2025
- 3 Sample collected by : Global Environment & Mining Services LLP
- 4 Particulars of sample collected : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Water
- 8 Sample Type : **RO Water**
- 9 Sample Location : **Plant Drinking Water**
- 10 Sample Code : **9859**
- 11 Date of Sampling : 14.03.2026
- 12 Sample Received : 16.03.2026
- 13 Date of Analysis : 19.03.2026
- 14 Date of Analysis Completion : 19.03.2026
- 15 Report Issue Date : **02.04.2026**
- 16 Report Number : **GEMS/SMIOR/RO/2025-26/4529**

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
PHYSICAL						
18	Odour	IS: 3025 (PART 5)- 1983, RA-2012	-	Agreeable	Agreeable	Agreeable
19	Taste	IS: 3025 (PART 8)- 1984, RA-2017	-	Agreeable	Agreeable	Agreeable
20	Temperature	APHA 24th Edition 2550 B: 2023	°C	25.9	-	-
21	Colour	APHA 24th Edition -2120 C:2023	Hazen	<5.0	5max	15max
CHEMICAL						
22	Free Residual Chloride	APHA 24th Edition 4500 Cl C: 2023	mg/L	0.00	0.2max	1max
23	Ammonia as (total Ammonia -N)	APHA 24th Edition 4500NH3 C:2023	mg/L	0.00	0.5 max	No Relaxation
24	Sulphide as H ₂ S	APHA 24th Edition 4500 S ²⁻ F: 2023	mg/L	<0.01	0.05 max	No Relaxation
TRACE METALS						
25	Nickel as Ni	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.02 max	No Relaxation
26	Manganese as Mn	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.1max	0.3max
27	Copper as Cu	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.05max	1.5max
28	Barium as B	APHA 24th Edition 3111 D: 2023	mg/L	<0.001	0.7max	No Relaxation
29	Zinc as Zn	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	5max	15max
30	Lead as Pb	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.01max	No Relaxation

Note: BDL-Below detectable Limit. **INFERENCE:** The Measured values are within the Limit.

Samreen P
Analysed By
Samreen P
Chemist

Venkatesh S
Authorised Signatory
Venkatesh S
Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

GEMS/SMIORE/RO/2025-26/4529

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
31	Aluminum as Al	APHA 24th Edition 3111 D: 2023	mg/L	<0.01	0.03max	0.2max
32	Chromium as Cr	APHA 24th Edition 3111 Cr B :2023	mg/L	<0.01	0.05max	No Relaxation
33	Cadmium as Cd	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.003max	No Relaxation
34	Mercury as Hg	IS 3025 (Part 48) Clause-5: 1994	mg/L	<0.0005	0.001max	No Relaxation
35	Arsenic as AS	APHA 24th Edition 3114- B: 2023	mg/L	<0.002	0.01max	0.05max
36	Selenium as Se	APHA 24th Edition 3114 C: 2023	mg/L	<0.005	0.01max	No Relaxation
MICROBIOLOGY PARAMETERS						
37	Total Coli form	IS: 15185:2016 RA 2021	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	
38	Escherichia Coli	IS: 15185:2016 RA 2021	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit.

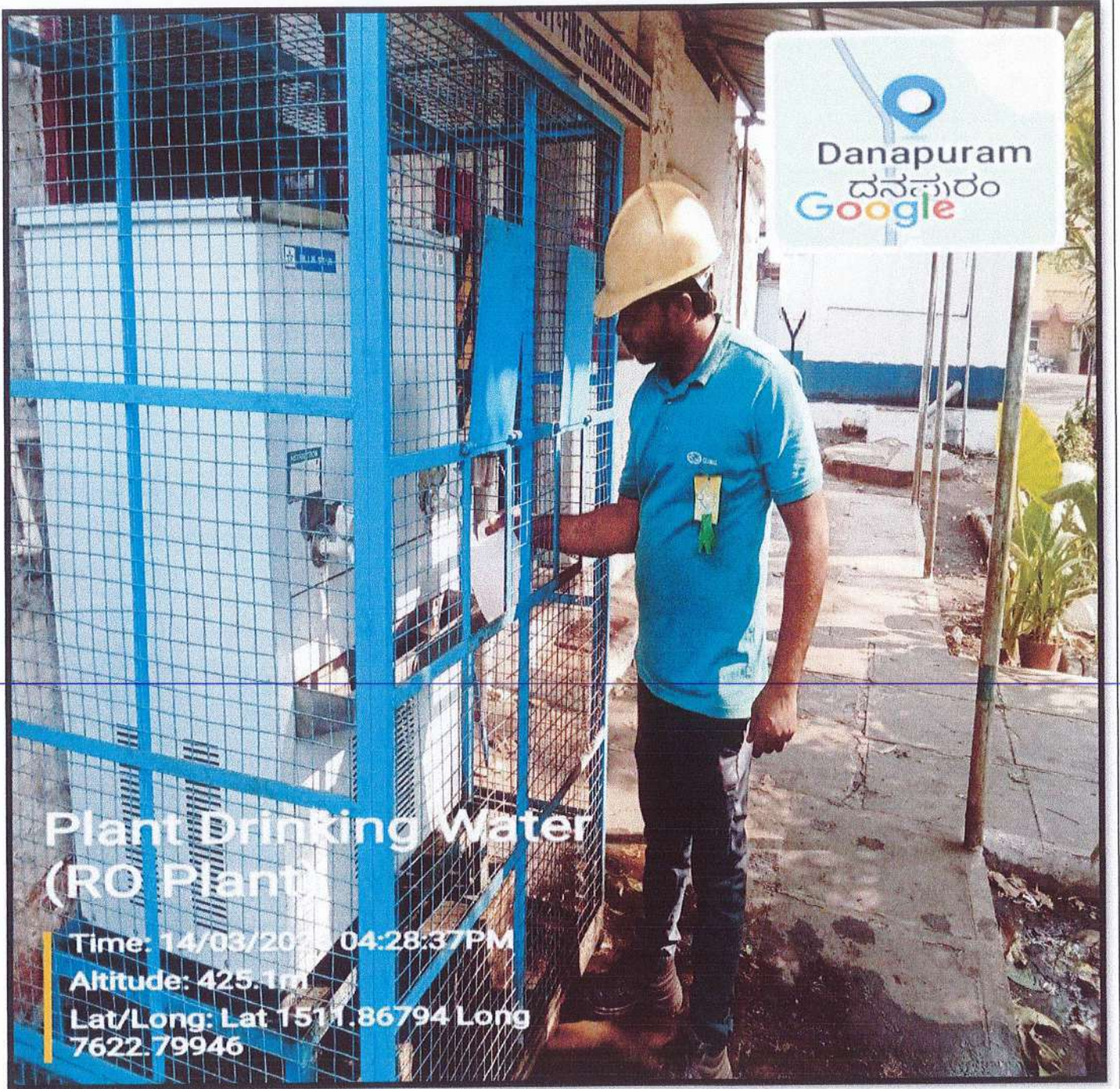
Samreen P
Analysed By
 Samreen P
 Chemist

S. Venkatesh
Authorised Signatory
 Venkatesh S.
 Asst. General Manager



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Water Quality march - 2026



Danapuram
ದನಪುರಂ
Google

Plant Drinking Water
(RO Plant)

Time: 14/03/2025 04:28:37PM
Altitude: 425.1m
Lat/Long: Lat 1511.86794 Long
7622.79946



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TC-16180

ANNEXURE-23
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- 1 Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant), Vyasankere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka
- 2 Customer Reference : Workorder No.4200011817 Dated:20.08.2025
- 3 Sample collected by : Global Environment & Mining Services LLP
- 4 Particulars of sample collected : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Water
- 8 Sample Type : Bore Water
- 9 Sample Location : Vyasankere Village
- 10 Sample Code : 9860
- 11 Date of Sampling : 14.03.2026
- 12 Sample Received : 16.03.2026
- 13 Date of Analysis : 19.03.2026
- 14 Date of Analysis Completion : 19.03.2026
- 15 Report Issue Date : 02.04.2026
- 16 Report Number : ULR-TC161802500004530F

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
PHYSICAL						
1.	pH	APHA 24th Edition 4500 H +B: 2023	-	7.58	6.5 to 8.5	NR
2	Conductivity	APHA 24th Edition 2510 A: 2023	µS/cm	1100	-	-
3	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	670.0	500max	2000 max
4	Turbidity (NTU)	APHA 24th Edition 2130 B: 2023	NTU	0.7	1 max	5max
5	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	1.8	-	-
CHEMICAL						
6	Sodium as Na	APHA 24th Edition 3500 Na B: 2023	mg/L	57.5	-	-
7	Potassium as K	APHA 24th Edition 3500 K B: 2023	mg/L	0.00	-	-
8	Calcium as Ca	APHA 24th Edition 3500 Ca B: 2023	mg/L	151.48	75max	200max
9	Magnesium as Mg	APHA 24th Edition 3500 Mg B: 2023	mg/L	16.55	30max	100max
10	Total Hardness as CaCO ₃	APHA 24th Edition 2340 C: 2023	mg/L	464.0	200max	600max
11	Chloride as Cl	APHA 24th Edition 4500 Cl B: 2023	mg/L	108.6	250max	1000 max
12	Fluoride as F	APHA 24th Edition 4500 F D: 2023	mg/L	0.79	1 max	1.5 max
13	Sulphate as SO ₄	APHA 24th Edition 4500 SO ₄ E: 2023	mg/L	41.66	200max	400max
14	Nitrate as NO ₃	APHA 24th Edition 4500 NO ₃ E: 2023	mg/L	8.96	45max	NR
15	Total Alkalinity as CaCO ₃	APHA 24th Edition 2320 B: 2023	mg/L	282.0	200max	600max
16	Total Iron as Fe	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.14	0.30max	NR
17	Boron as B	APHA 24th Edition 4500 BB: 2023	mg/L	<0.01	0.5max	1.0max

Note: INFERENCE: The Measured values are within the Limit.

Analysed By
Samreen P
Chemist

Authorised Signatory
Venkatesh
Asst. General Manager

Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 7Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Thinblades After analysis Discard 7 days.
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Website : www.gemslip.in

ANNEXURE-23
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- 1 Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka
- 2 Customer Reference : Workorder No.4200011817 Dated:20.08.2025
- 3 Sample collected by : Global Environment & Mining Services LLP
- 4 Particulars of sample collected : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Water
- 8 Sample Type : **Bore Water**
- 9 Sample Location : **Vyasanakere Village**
- 10 Sample Code : **9860**
- 11 Date of Sampling : 14.03.2026
- 12 Sample Received : 16.03.2026
- 13 Date of Analysis : 19.03.2026
- 14 Date of Analysis Completion : 19.03.2026
- 15 Report Issue Date : **02.04.2026**
- 16 Report Number : **GEMS/SMIORE/BW/2025-26/4530**

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
PHYSICAL						
18	Odour	IS: 3025 (PART 5)- 1983, RA-2012	-	Agreeable	Agreeable	Agreeable
19	Taste	IS: 3025 (PART 8)- 1984, RA-2017	-	Agreeable	Agreeable	Agreeable
20	Temperature	APHA 24th Edition 2550 B: 2023	°C	25.3	-	-
21	Colour	APHA 24th Edition -2120 C:2023	Hazen	<5.0	5max	15max
CHEMICAL						
22	Free Residual Chloride	APHA 24th Edition 4500 Cl C: 2023	mg/L	0.00	0.2max	1max
23	Ammonia as (total Ammonia -N)	APHA 24th Edition 4500NH3 C:2023	mg/L	0.00	0.5 max	No Relaxation
		APHA 24th Edition 4500 S ² F: 2023	mg/L	<0.01	0.05 max	No Relaxation
24	Sulphide as H ₂ S	APHA 24th Edition 4500 S ² F: 2023	mg/L	<0.01	0.05 max	No Relaxation
TRACE METALS						
25	Nickel as Ni	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.02 max	No Relaxation
26	Manganese as Mn	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.1max	0.3max
27	Copper as Cu	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.05max	1.5max
28	Barium as B	APHA 24th Edition 3111 D: 2023	mg/L	<0.001	0.7max	No Relaxation
29	Zinc as Zn	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	5max	15max
30	Lead as Pb	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.01max	No Relaxation

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit

Samreen P
Analysed By
Samreen P
Chemist

S. Venkatesh
Authorised Signatory
Venkatesh S
Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

GEMS/SMIOR/BW/2025-26/4530

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
31	Aluminum as Al	APHA 24th Edition 3111 D: 2023	mg/L	<0.01	0.03max	0.2max
32	Chromium as Cr	APHA 24th Edition 3111Cr B:2023	mg/L	<0.01	0.05max	No Relaxation
33	Cadmium as Cd	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.003max	No Relaxation
34	Mercury as Hg	IS 3025 (Part 48) Clause-5: 1994	mg/L	<0.0005	0.001max	No Relaxation
35	Arsenic as AS	APHA 24th Edition 3114- B: 2023	mg/L	<0.002	0.01max	0.05max
36	Selenium as Se	APHA 24th Edition 3114 C: 2023	mg/L	<0.005	0.01max	No Relaxation
MICROBIOLOGY PARAMETERS						
37	Total Coli form	IS: 15185:2016 RA 2021	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	
38	Escherichia Coli	IS: 15185:2016 RA 2021	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit.

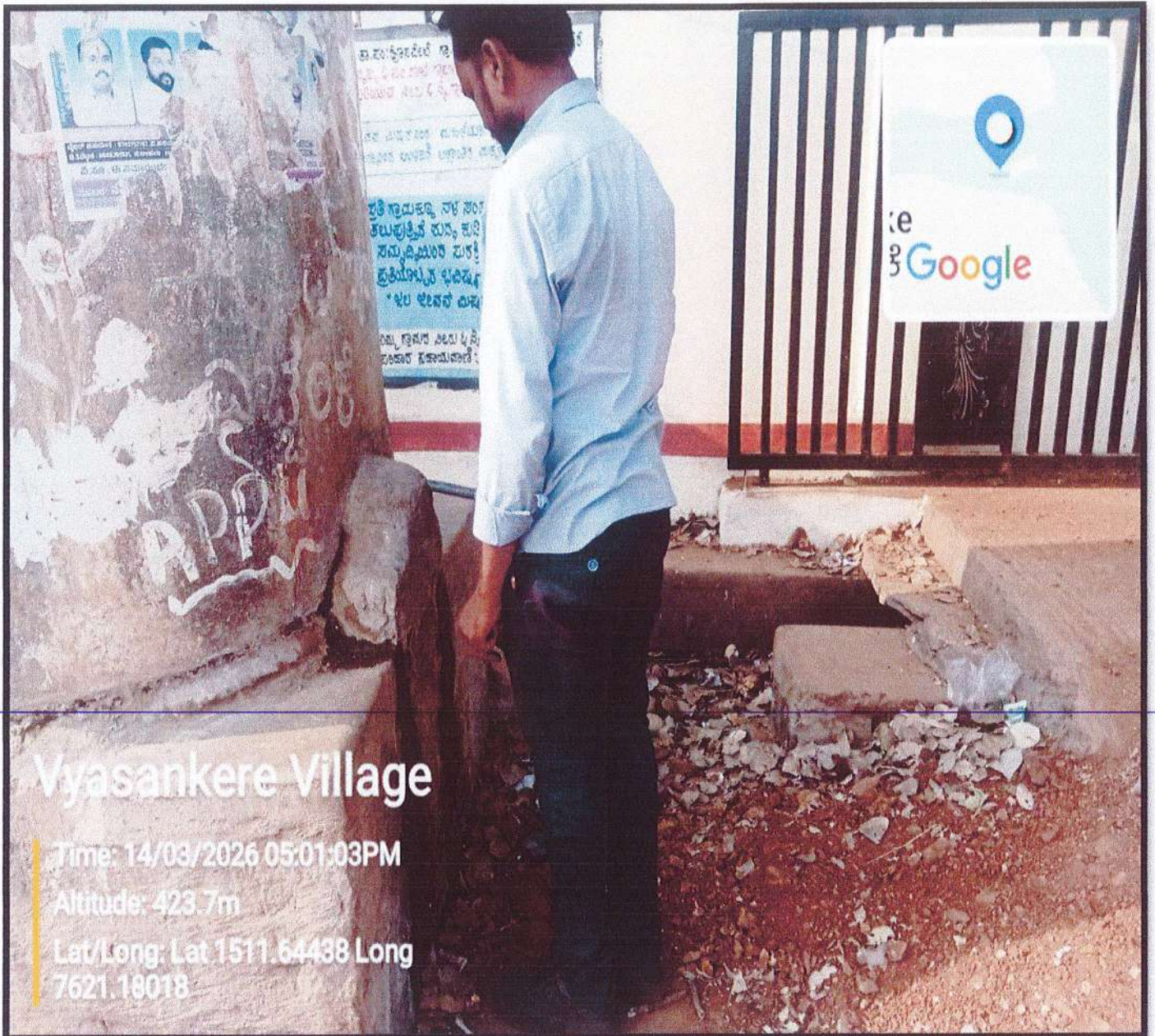
Sanreen P
Analysed By
 Sanreen P
 Chemist

S. Venkatesh
Authorised Signatory
 Venkatesh S
 Asst. General Manager



- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

Water Quality march - 2026



Vyasankere Village

Time: 14/03/2026 05:01:03PM

Altitude: 423.7m

Lat/Long: Lat 1511.64438 Long
7621.18018



GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)
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 Ph : 08394 355369
 e-mail : gems_hpt@yahoo.com
 Website : www.gemslp.in



TC-16180

ANNEXURE-24
 GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- 1 Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
 (Metal & Ferro Alloys Plant), Vyasanakere,
 Hanumanahalli Village, Hospet Taluk,
 Vijayanagara Dist, Karnataka
- 2 Customer Reference : Workorder No.4200011817 Dated:20.08.2025
- 3 Sample collected by : Global Environment & Mining Services LLP
- 4 Particulars of sample collected : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Water
- 8 Sample Type : **Bore Water**
- 9 Sample Location : **Galemmanagudi Village**
- 10 Sample Code : **9861**
- 11 Date of Sampling : 14.03.2026
- 12 Sample Received : 16.03.2026
- 13 Date of Analysis : 19.03.2026
- 14 Date of Analysis Completion : 19.03.2026
- 15 Report Issue Date : **02.04.2026**
- 16 Report Number : **ULR-TC1618025000004531F**

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
PHYSICAL						
1.	pH	APHA 24th Edition 4500 H +B: 2023	-	8.11	6.5 to 8.5	NR
2	Conductivity	APHA 24th Edition 2510 A: 2023	µS/cm	2070	-	-
3	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	1260	500max	2000 max
4	Turbidity (NTU)	APHA 24th Edition 2130 B: 2023	NTU	0.3	1 max	5max
5	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	<1.0	-	-
CHEMICAL						
6	Sodium as Na	APHA 24th Edition 3500 Na B: 2023	mg/L	183.66	-	-
7	Potassium as K	APHA 24th Edition 3500 K B: 2023	mg/L	0.00	-	-
8	Calcium as Ca	APHA 24th Edition 3500 Ca B: 2023	mg/L	116.15	75max	200max
9	Magnesium as Mg	APHA 24th Edition 3500 Mg B: 2023	mg/L	79.58	30max	100max
10	Total Hardness as CaCO3	APHA 24th Edition 2340 C: 2023	mg/L	581.4	200max	600max
11	Chloride as Cl	APHA 24th Edition 4500 Cl B: 2023	mg/L	359.66	250max	1000 max
12	Fluoride as F	APHA 24th Edition 4500 F D: 2023	mg/L	0.48	1 max	1.5 max
13	Sulphate as SO4	APHA 24th Edition 4500 SO4 E: 2023	mg/L	113.18	200max	400max
14	Nitrate as NO3	APHA 24th Edition 4500 NO3 E: 2023	mg/L	13.68	45max	NR
15	Total Alkalinity as CaCO3	APHA 24th Edition 2320 B: 2023	mg/L	376.5	200max	600max
16	Total Iron as Fe	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.11	0.30max	NR
17	Boron as B	APHA 24th Edition 4500 BB: 2023	mg/L	<0.01	0.5max	1.0max

Note: INFERENCE: The Measured values are within the Limit.

Samreen P
Analysed By
 Samreen P
 Chemist

Venkatesh S
Authorised Signatory
 Venkatesh S
 Asst. General Manager

Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 7Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Thimbles After analysis Discard 7 days.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
4. Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
5. Recognised by Ministry of Environment, Forest, and Climate Change for Laboratory
6. Recognised by Government of Karnataka, Maharashtra, Goa for DGPS survey



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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

ANNEXURE-24
GEMS-LD/TF/23/01**Analysis Report of Water Quality Data**

- 1 Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist, Karnataka
- 2 Customer Reference : Workorder No.4200011817 Dated:20.08.2025
- 3 Sample collected by : Global Environment & Mining Services LLP
- 4 Particulars of sample collected : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Water
- 8 Sample Type : **Bore Water**
- 9 Sample Location : **Galemmanagudi Village**
- 10 Sample Code : **9861**
- 11 Date of Sampling : 14.03.2026
- 12 Sample Received : 16.03.2026
- 13 Date of Analysis : 19.03.2026
- 14 Date of Analysis Completion : 19.03.2026
- 15 Report Issue Date : **02.04.2026**
- 16 Report Number : **GEMS/SMIOR/BW/2025-26/4531**

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
PHYSICAL						
18	Odour	IS: 3025 (PART 5)- 1983, RA-2012	-	Agreeable	Agreeable	Agreeable
19	Taste	IS: 3025 (PART 8)- 1984, RA-2017	-	Agreeable	Agreeable	Agreeable
20	Temperature	APHA 24th Edition 2550 B: 2023	°C	26.4	-	-
21	Colour	APHA 24th Edition -2120 C:2023	Hazen	<5.0	5max	15max
CHEMICAL						
22	Free Residual Chloride	APHA 24th Edition 4500 Cl C: 2023	mg/L	0.00	0.2max	1max
23	Ammonia as (total Ammonia -N)	APHA 24th Edition 4500NH3 C:2023	mg/L	0.00	0.5 max	No Relaxation
24	Sulphide as H ₂ S	APHA 24th Edition 4500 S ²⁻ F: 2023	mg/L	<0.01	0.05 max	No Relaxation
TRACE METALS						
25	Nickel as Ni	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.02 max	No Relaxation
26	Manganese as Mn	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.1max	0.3max
27	Copper as Cu	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.05max	1.5max
28	Barium as B	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.7max	No Relaxation
29	Zinc as Zn	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	5max	15max
30	Lead as Pb	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.01max	No Relaxation

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit.

Samreen P
Analysed By
Samreen P
Chemist

Venkatesh S
Authorised Signatory
Venkatesh S
Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey



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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

GEMS/SMIOR/BW/2025-26/4531

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
31	Aluminum as Al	APHA 24th Edition 3111 D: 2023	mg/L	<0.01	0.03max	0.2max
32	Chromium as Cr	APHA 24th Edition 3111Cr B :2023	mg/L	<0.01	0.05max	No Relaxation
33	Cadmium as Cd	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.003max	No Relaxation
34	Mercury as Hg	IS 3025 (Part 48) Clause-5: 1994	mg/L	<0.0005	0.001max	No Relaxation
35	Arsenic as AS	APHA 24th Edition 3114 B: 2023	mg/L	<0.002	0.01max	0.05max
36	Selenium as Se	APHA 24th Edition 3114 C: 2023	mg/L	<0.005	0.01max	No Relaxation
MICROBIOLOGY PARAMETERS						
37	Total Coli form	IS: 15185:2016 RA 2021	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	
38	Escherichia Coli	IS: 15185:2016 RA 2021	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	

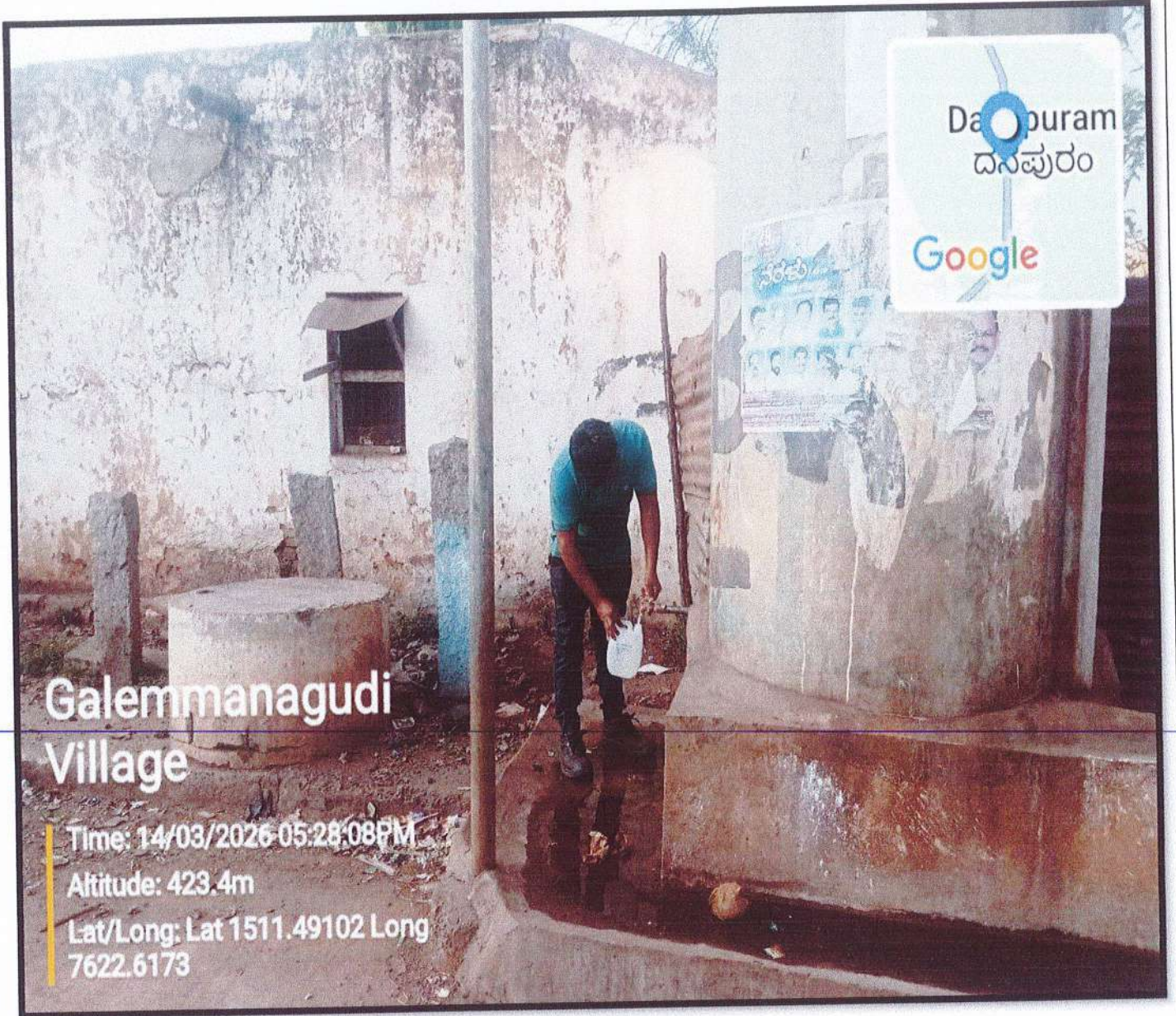
Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit

S. Samreen P.
Analysed By
Samreen P
Chemist

S. Venkatesh
Authorised Signatory
Venkatesh S
Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

Water Quality march - 2026



Galemmanagudi
Village

Time: 14/03/2026 05:28:08PM

Altitude: 423.4m

Lat/Long: Lat 1511.49102 Long
7622.6173



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e-mail : gems_hpt@yahoo.com

Website : www.gemslip.in



TC-16180

ANNEXURE-25
GEMS-LD/TF/23/01

Analysis Report of Water Quality Data

- 1 Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vyasanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist., Karnataka
- 2 Customer Reference : Workorder No.4200011817 Dated:20.08.2025
- 3 Sample collected by : Global Environment & Mining Services LLP
- 4 Particulars of sample collected : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Water
- 8 Sample Type : **Bore Water**
- 9 Sample Location : **Hanumanahalli Village**
- 10 Sample Code : **9862**
- 11 Date of Sampling : **14.03.2026**
- 12 Sample Received : **16.03.2026**
- 13 Date of Analysis : **19.03.2026**
- 14 Date of Analysis Completion : **19.03.2026**
- 15 Report Issue Date : **02.04.2026**
- 16 Report Number : **ULR-TC1618025000004532F**

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
PHYSICAL						
1.	pH	APHA 24th Edition 4500 H +B: 2023	-	7.66	6.5 to 8.5	NR
2	Conductivity	APHA 24th Edition 2510 A: 2023	µS/cm	1060	-	-
3	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	648	500max	2000 max
4	Turbidity (NTU)	APHA 24th Edition 2130 B: 2023	NTU	0.3	1 max	5max
5	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	<1.0	-	-
CHEMICAL						
6	Sodium as Na	APHA 24th Edition 3500 Na B: 2023	mg/L	84.51	-	-
7	Potassium as K	APHA 24th Edition 3500 K B: 2023	mg/L	0.00	-	-
8	Calcium as Ca	APHA 24th Edition 3500 Ca B: 2023	mg/L	35.86	75max	200max
9	Magnesium as Mg	APHA 24th Edition 3500 Mg B: 2023	mg/L	43.11	30max	100max
10	Total Hardness as CaCO3	APHA 24th Edition 2340 C: 2023	mg/L	274.51	200max	600max
11	Chloride as Cl	APHA 24th Edition 4500 Cl B: 2023	mg/L	178.35	250max	1000 max
12	Fluoride as F	APHA 24th Edition 4500 F D: 2023	mg/L	0.41	1 max	1.5 max
13	Sulphate as SO4	APHA 24th Edition 4500 SO4 E: 2023	mg/L	108.55	200max	400max
14	Nitrate as NO3	APHA 24th Edition 4500 NO3 E: 2023	mg/L	12.36	45max	NR
15	Total Alkalinity as CaCO3	APHA 24th Edition 2320 B: 2023	mg/L	184.3	200max	600max
16	Total Iron as Fe	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.14	0.30max	NR
17	Boron as B	APHA 24th Edition 4500 BB: 2023	mg/L	<0.01	0.5max	1.0max

Note: INFERENCE: The Measured values are within the Limit.

Samreen P
Analysed By
Samreen P
Chemist

S. Venkatesh
Authorised Signatory
Venkatesh
Asst. General Manager

Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 7Days, Waste Water After Analysis Discard the Samples, Minerals 3 Months, Filter papers & Thimbles After analysis Discard 7 days.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslip.in

ANNEXURE-25
GEMS-LD/TF/23/01**Analysis Report of Water Quality Data**

1	Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasnakere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2	Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3	Sample collected by	: Global Environment & Mining Services LLP
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Water
8	Sample Type	: Bore Water
9	Sample Location	: Hanumanahalli Village
10	Sample Code	: 9862
11	Date of Sampling	: 14.03.2026
12	Sample Received	: 16.03.2026
13	Date of Analysis	: 19.03.2026
14	Date of Analysis Completion	: 19.03.2026
15	Report Issue Date	: 02.04.2026
16	Report Number	: GEMS/SMIORE/BW/2025-26/4532

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
PHYSICAL						
18	Odour	IS: 3025 (PART 5)- 1983, RA-2012	-	Agreeable	Agreeable	Agreeable
19	Taste	IS: 3025 (PART 8)- 1984, RA-2017	-	Agreeable	Agreeable	Agreeable
20	Temperature	APHA 24th Edition 2550 B: 2023	°C	26.4	-	-
21	Colour	APHA 24th Edition -2120 C:2023	Hazen	<5.0	5max	15max
CHEMICAL						
22	Free Residual Chloride	APHA 24th Edition 4500 Cl C: 2023	mg/L	0.00	0.2max	1max
23	Ammonia as (total Ammonia -N)	APHA 24th Edition 4500NH3 C2023	mg/L	0.00	0.5 max	No Relaxation
24	Sulphide as H2S	APHA 24th Edition 4500 S ²⁻ F: 2023	mg/L	<0.01	0.05 max	No Relaxation
TRACE METALS						
25	Nickel as Ni	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.02 max	No Relaxation
26	Manganese as Mn	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.1max	0.3max
27	Copper as Cu	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.05max	1.5max
28	Barium as B	APHA 24th Edition 3111 D: 2023	mg/L	<0.001	0.7max	No Relaxation
29	Zinc as Zn	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	5max	15max
30	Lead as Pb	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.01max	No Relaxation

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit.

Samreen P
Analysed By
Samreen P
Chemist

S. Venkatesh
Authorised Signatory
Venkatesh S
Asst. General Manager

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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

GEMS/SMIOR/BW/2025-26/4532

Sl. No.	Parameters	Protocol	Unit	Results	Standards as per IS: 10500:2012	
					Acceptable Limits	Permissible Limit in the Absence of Alternate Source
31	Aluminum as Al	APHA 24th Edition 3111 D: 2023	mg/L	<0.01	0.03max	0.2max
32	Chromium as Cr	APHA 24th Edition 3111 Cr B :2023	mg/L	<0.01	0.05max	No Relaxation
33	Cadmium as Cd	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.003max	No Relaxation
34	Mercury as Hg	IS 3025 (Part 48) Clause-5: 1994	mg/L	<0.0005	0.001max	No Relaxation
35	Arsenic as AS	APHA 24th Edition 3114- B: 2023	mg/L	<0.002	0.01max	0.05max
36	Selenium as Se	APHA 24th Edition 3114 C: 2023	mg/L	<0.005	0.01max	No Relaxation
MICROBIOLOGY PARAMETERS						
37	Total Coli form	IS: 15185:2016 RA 2021	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	
38	Escherichia Coli	IS: 15185:2016 RA 2021	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit.

Samreen P
Analysed By
Samreen P
Chemist

S. Venkatesh
Authorised Signatory
Venkatesh S
Asst. General Manager

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

Water Quality march - 2026





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e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

ANNEXURE-26
GEMS-LD/TF/23/01

Analysis Report of Surface Water Quality Data

- 1 Name of the Industry : **M/s. The Sandur Manganese & Iron Ores Ltd.**
(Metal & Ferro Alloys Plant), Vysanakere,
Hanumanahalli Village, Hospet Taluk,
Vijayanagara Dist, Karnataka,
- 2 Customer Reference : Workorder No.4200011817 Dated:20.08.2025
- 3 Sample collected by : Global Environment & Mining Services LLP
- 4 Particulars of sample collected : Grab Sampling
- 5 Sampling Procedure : GEMS-LD/SOP/32
- 6 Discipline : Chemical
- 7 Group : Water
- 8 Sample Type : **Surface Water**
- 9 Sample Location : **Tungabhadra Dam**
- 10 Sample Code : **9863**
- 11 Date of Sampling : **14.03.2026**
- 12 Sample Received : **16.03.2026**
- 13 Date of Analysis : **19.03.2026**
- 14 Date of Analysis Completion : **19.03.2026**
- 15 Report Issue Date : **02.04.2026**
- 16 Report Number : **GEMS/SMIORE/SW/2025-26/4533**

Sl. No.	Parameters	Protocol	Unit	Results	IS 2296:1982 Standard Class C
PHYSICAL					
1	Colour	APHA 24th Edition -2120 C:2023	Hazen	8	300
2	pH	APHA 24th Edition 4500 H + B: 2023	-	7.65	6.50 to 8.5
3	Conductivity	APHA 24th Edition 2510 A: 2023	µS/cm	300	-
4	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	180	-
5	Turbidity (NTU)	APHA 24th Edition 2130 B: 2023	NTU	4.8	-
6	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	14.0	-
CHEMICAL					
7	Biochemical Oxygen Demand for 3 days at 27°C	IS 3025 PART 44: 2023	mg/L	3.4	3
8	Dissolved Oxygen	APHA 24th Edition 4500 O C:2023	mg/L	6.1	Min 4
9	Chemical Oxygen Demand as O ₂	APHA 24th Edition 5520 B: 2023	mg/L	15.9	-
10	Oil & Grease	APHA 24th Edition 5520 B: 2023	mg/L	0.00	0.1
11	Sodium as Na	APHA 24th Edition 3500 Na B: 2023	mg/L	30.51	-
12	Potassium as K	APHA 24th Edition 3500 K B: 2023	mg/L	11.99	-
13	Calcium as Ca	APHA 24th Edition 3500 Ca B: 2023	mg/L	15.19	-
14	Magnesium as Mg	APHA 24th Edition 3500 Mg B: 2023	mg/L	7.86	-
15	Total Hardness as CaCO ₃	APHA 24th Edition 2340 C: 2023	mg/L	71.2	-
16	Chloride as Cl	APHA 24th Edition 4500 Cl B: 2023	mg/L	21.6	600
17	Fluoride as F	APHA 24th Edition 4500 F D: 2023	mg/L	0.48	1.5
18	Sulphate as SO ₄	APHA 24th Edition 4500 SO ₄ E: 2023	mg/L	27.66	400
19	Nitrate as NO ₃	APHA 24th Edition 4500 NO ₃ E: 2023	mg/L	6.02	50
20	Total Alkalinity as CaCO ₃	APHA 24th Edition 2320 B: 2023	mg/L	63.94	-
21	Total Iron as Fe	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.22	50
TRACE METALS					
22	Copper as Cu	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	1.5
23	Zinc as Zn	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	15
24	Lead as Pb	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.1
25	Chromium as Cr ⁺⁶	IS:3025 (Part-52)2014	mg/L	<0.03	0.05
26	Cadmium as Cd	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.0

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- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey





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Ph : 08394 355369

e-mail : gems_hpt@yahoo.com

Website : www.gemslp.in

GEMS/SMIOR/SW/2025-26/4533					
27	Arsenic as AS	APHA 24th Edition 3114- B: 2023	mg/L	<0.001	0.2
28	Selenium as Se	APHA 24th Edition 3114 C: 2023	mg/L	<0.005	0.05
MICROBIOLOGY PARAMETER					
29	Total Coliform	IS: 1622: 1981	MPN/100ml	121	5000

Note: BDL-Below detectable Limit. **INFERENCE:** The Measured values are within the Limit.

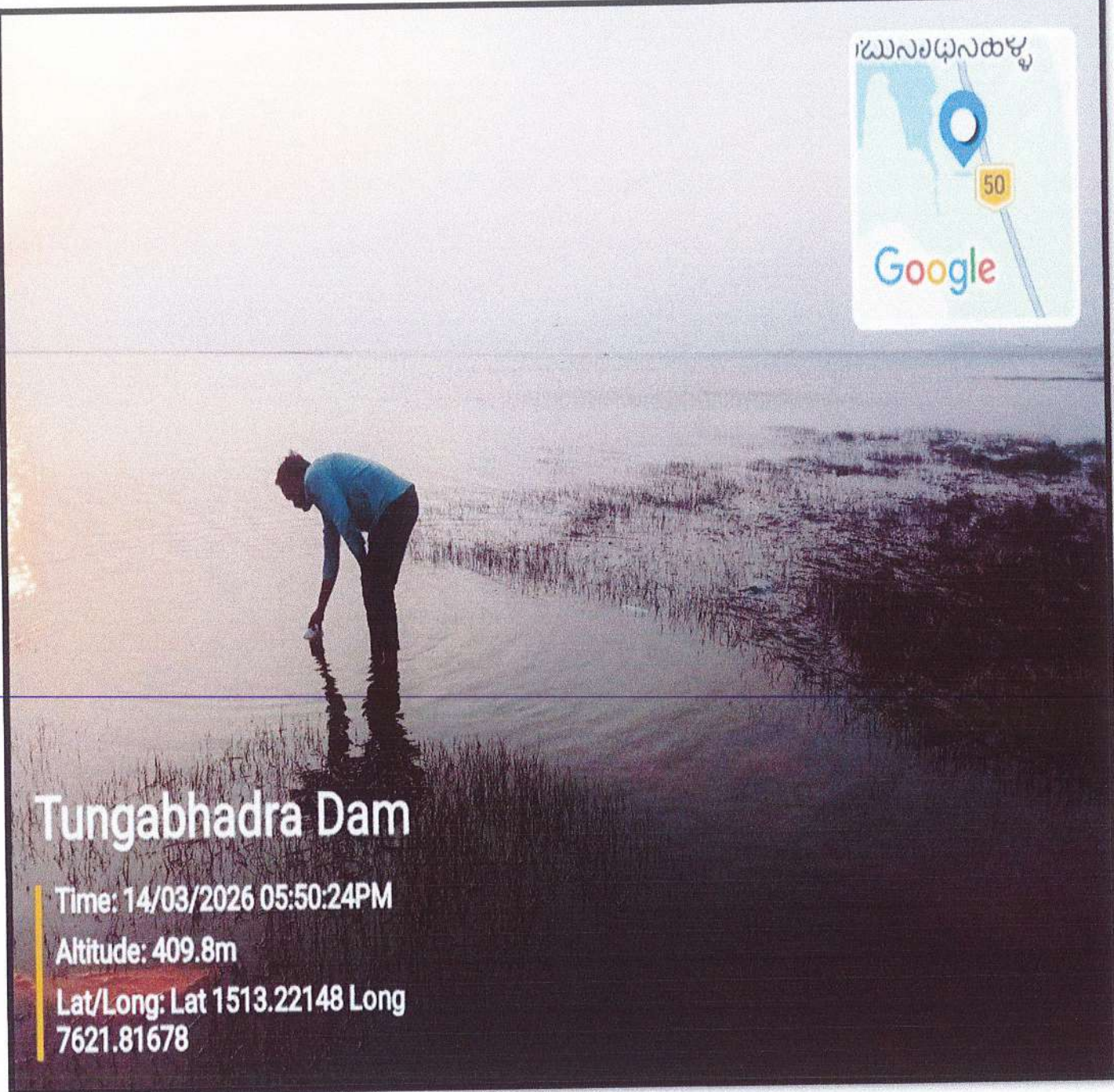
Samreen P
Analysed By
 Samreen P
 Chemist

S. Venkatesh S
Authorised Signatory
 Venkatesh S
 Asst. General Manager



- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

Water Quality march - 2026



Tungabhadra Dam

Time: 14/03/2026 05:50:24PM

Altitude: 409.8m

Lat/Long: Lat 1513.22148 Long
7621.81678



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NABET

GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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ANNEXURE-27
GEMS-LD/TF/23/01**Analysis Report of Water Quality Data**

1	Name of the Industry	: M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant), Vyasankere, Hanumanahalli Village, Hospet Taluk, Vijayanagara Dist., Karnataka
2	Customer Reference	: Workorder No.4200011817 Dated:20.08.2025
3	Sample collected by	: Global Environment & Mining Services LLP
4	Particulars of sample collected	: Grab Sampling
5	Sampling Procedure	: GEMS-LD/SOP/32
6	Discipline	: Chemical
7	Group	: Water
8	Sample Type	: Surface Water
9	Sample Location	: Plant Reservoir
10	Sample Code	: 9866
11	Date of Sampling	: 14.03.2026
12	Sample Received	: 16.03.2026
13	Date of Analysis	: 19.03.2026
14	Date of Analysis Completion	: 19.03.2026
15	Report Issue Date	: 02.04.2026
16	Report Number	: GEMS/SMIOR/SW/2025-26/4536

Sl. No.	Parameters	Protocol	Unit	Results	IS 2296:1982
					Standard Class C
PHYSICAL					
1	Colour	APHA 24th Edition -2120 C:2023	Hazen	<5	300
2	pH	APHA 24th Edition 4500 H +B: 2023	-	7.96	6.50 to 8.5
3	Conductivity	APHA 24th Edition 2510 A: 2023	µS/cm	430	-
4	Total Dissolved Solids	APHA 24th Edition 2540 C: 2023	mg/L	260	-
5	Turbidity (NTU)	APHA 24th Edition 2130 B: 2023	NTU	2.9	-
6	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	8.0	-
CHEMICAL					
7	Biochemical Oxygen Demand for 3 days at 27°C	IS 3025 PART 44: 2023	mg/L	3.8	3
8	Dissolved Oxygen	APHA 24th Edition 4500 O C:2023	mg/L	5.9	4
9	Chemical Oxygen Demand as O ₂	APHA 24th Edition 5520 B: 2023	mg/L	19.11	-
10	Oil & Grease	APHA 24th Edition 5520 B: 2023	mg/L	0.00	0.1
11	Sodium as Na	APHA 24th Edition 3500 Na B: 2023	mg/L	22.19	-
12	Potassium as K	APHA 24th Edition 3500 K B: 2023	mg/L	12.95	-
13	Calcium as Ca	APHA 24th Edition 3500 Ca B: 2023	mg/L	22.18	-
14	Magnesium as Mg	APHA 24th Edition 3500 Mg B: 2023	mg/L	5.47	-
15	Total Hardness as CaCO ₃	APHA 24th Edition 2340 C: 2023	mg/L	77.24	-
16	Chloride as Cl	APHA 24th Edition 4500 Cl B: 2023	mg/L	30.95	600
17	Fluoride as F	APHA 24th Edition 4500 F D: 2023	mg/L	0.76	1.5
18	Sulphate as SO ₄	APHA 24th Edition 4500 SO ₄ E: 2023	mg/L	93.56	400
19	Nitrate as NO ₃	APHA 24th Edition 4500 NO ₃ E: 2023	mg/L	8.51	50
20	Total Alkalinity as CaCO ₃	APHA 24th Edition 2320 B: 2023	mg/L	62.66	-
21	Total iron as Fe	APHA 24th Edition 3500 Fe B: 2023	mg/L	6.14	50
TRACE METALS					
22	Copper as Cu	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	1.5
23	Zinc as Zn	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	15
24	Lead as Pb	APHA 24th Edition 3111 B: 2023	mg/L	<0.005	0.1
25	Chromium as Cr ⁺⁶	IS:3025 (Part-52)2014	mg/L	<0.03	0.05
26	Cadmium as Cd	APHA 24th Edition 3111 B: 2023	mg/L	<0.001	0.01

- Recognized by Ministry of Environment, Forest, and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey





GEMS



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		GEMS/SMIOR/SW/2025-26/4536			
27	Arsenic as AS	APHA 24th Edition 3114- B: 2023	mg/L	<0.002	0.2
28	Selenium as Se	APHA 24th Edition 3114 C: 2023	mg/L	<0.005	0.05
MICROBIOLOGY PARAMETER					
29	Total Coliform	IS: 1622: 1981	MPN/100ml	94	5000

Note: BDL-Below detectable Limit. INFERENCE: The Measured values are within the Limit.

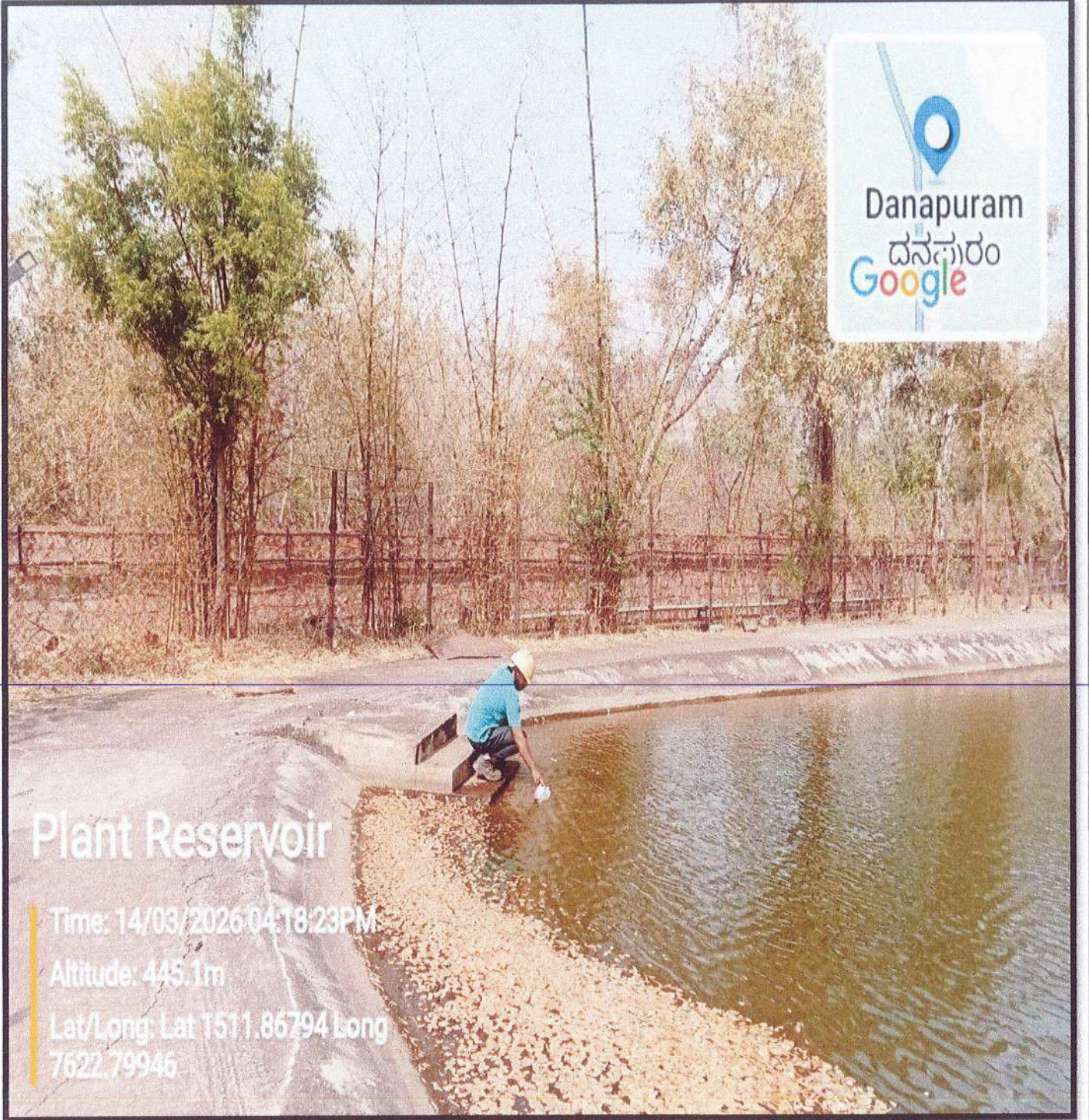
Samreen P
Analysed By
 Samreen P
 Chemist

S. Venkatesh
Authorised Signatory
 Venkatesh S
 Asst. General Manager



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Water Quality march - 2026



Plant Reservoir

Time: 14/03/2026 04:18:23PM
Altitude: 445.1m
Lat/Long: Lat 1511.86794 Long 7622.79946