

ENVIRONMENTAL MONITORING REPORT

December, 2024

Project : Dharmapura Iron Ore Mine

(ML No.2543)

**R.M. Block, Ramgad Range, Dharmapura village,
Sandur Taluk, Ballari Dist., Karnataka.**

Lessee

M/s. VNK Menon

**No. 6, KHB colony Sandur,
Ballari District, Karnataka**

ENVIRONMENTAL LABORATORY

(Unit of Mineral Engineering Services)

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

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

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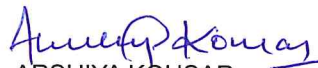
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TEST REPORT

Table No. 1

AMBIENT AIR QUALITY

Name of the Client : M/s. V.N.K. Menon Name of the Project : Dharmapura Iron Ore Mine (ML No.2543) Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services) Station at & Code : A - I, Core Zone (ML Area) Duration : 24 Hrs Issue date : 02.01.2025 Reference IS 5182 & Lab SOP					
Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter	
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)
02.12.2024	N/24/12/3-0001	9	12	48	25
03.12.2024	N/24/12/3-0016	11	15	36	20
11.12.2024	N/24/12/4-0118	7	9	43	25
12.12.2024	N/24/12/4-0141	12	18	56	32
16.12.2024	N/24/12/5-0014	11	13	53	30
17.12.2024	N/24/12/5-0055	9	12	50	28
25.12.2024	N/24/12/6-0162	10	11	49	27
26.12.2024	N/24/12/6-0189	13	18	42	22
Limits for Industrial ,		80	80	100	60
Residential, Rural and other Areas		24 Hrs	24 Hrs	24 Hrs	24 Hrs


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

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TEST REPORT

Table No. 2

AMBIENT AIR QUALITY

Name of the Client : M/s. V.N.K. Menon Name of the Project : Dharmapura Iron Ore Mine (ML No.2543) Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services) Station at & Code : A - II, Dharmapura Duration : 24 Hrs Issue date : 02.01.2025 Reference IS 5182 & Lab SOP					
Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter	
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)
06.12.2024	N/24/12/3-0095	11	16	42	26
07.12.2024	N/24/12/3-0185	12	15	51	26
13.12.2024	N/24/12/4-0168	5	13	56	32
14.12.2024	N/24/12/4-0222	9	12	42	22
16.12.2024	N/24/12/5-0007	8	14	50	26
17.12.2024	N/24/12/5-0047	9	11	47	26
25.12.2024	N/24/12/6-0157	9	12	54	28
26.12.2024	N/24/12/6-0184	11	18	53	27
Limits for Industrial ,		80	80	100	60
Residential, Rural and other Areas		24 Hrs	24 Hrs	24 Hrs	24 Hrs

Arshiya Kousar

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Table No. 3

AMBIENT AIR QUALITY

Name of the Client : M/s. V.N.K. Menon Name of the Project : Dharmapura Iron Ore Mine (ML No.2543) Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services) Station at & Code : A - III, Yeshwanthanagar Duration : 24 Hrs Issue date : 02.01.2025 Reference IS 5182 & Lab SOP					
Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter	
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)
06.12.2024	N/24/12/3-0085	10	11	47	20
07.12.2024	N/24/12/3-0176	10	16	37	20
09.12.2024	N/24/12/4-0014	12	15	56	30
10.12.2024	N/24/12/4-0072	9	12	49	27
20.12.2024	N/24/12/5-0148	7	11	54	28
21.12.2024	N/24/12/5-0228	11	14	50	24
23.12.2024	N/24/12/6-0029	10	18	47	23
24.12.2024	N/24/12/6-0092	12	15	55	27
Limits for Industrial ,		80	80	100	60
Residential, Rural and other Areas		24 Hrs	24 Hrs	24 Hrs	24 Hrs


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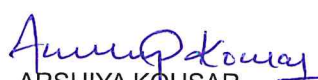
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TEST REPORT

Table No. 4

AMBIENT AIR QUALITY

Name of the Client : M/s. V.N.K. Menon Name of the Project : Dharmapura Iron Ore Mine (ML No.2543) Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services) Station at & Code : A - IV Ramgad Duration : 24 Hrs Issue date : 02.01.2025 Reference IS 5182 & Lab SOP					
Date of Sampling	Lab Code	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	Particulate Matter	
				PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)
06.12.2024	N/24/12/3-0095	11	16	42	26
07.12.2024	N/24/12/3-0185	12	15	51	26
13.12.2024	N/24/12/4-0168	5	13	56	32
14.12.2024	N/24/12/4-0222	9	12	42	22
16.12.2024	N/24/12/5-0007	8	14	50	26
17.12.2024	N/24/12/5-0047	9	11	47	26
25.12.2024	N/24/12/6-0157	9	12	54	28
26.12.2024	N/24/12/6-0184	11	18	53	27
Limits for Industrial ,		80	80	100	60
Residential, Rural and other Areas		24 Hrs	24 Hrs	24 Hrs	24 Hrs


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Table No. 5

Fugitive Emission

Name of the Client : M/s. V.N.K. Menon		
Name of the Project : Dharmapura Iron Ore Mine (ML No.2543)		
Sample Collected by : Environmental Laboratory		
(Unit of Mineral Engineering Services)		
Station at & Code : A - VI, Loading point		
Duration : 08 Hrs		
Issue date : 02.01.2025		
Date of sample	Lab Code	Particulate mater ($\mu\text{g}/\text{m}^3$)
02.13.2024	N/24/12/3-0013	312
11.12.2024	N/24/12/4-0119	296

Station at & Code : A - VII, Dumping point		
Duration : 08 Hrs		
Date of sample	Lab Code	Particulate mater ($\mu\text{g}/\text{m}^3$)
03.12.2024	N/24/12/3-0017	465
12.12.2024	N/24/12/4-0142	387

Station at & Code : A - VIII, Haulage Road		
Duration : 08 Hrs		
Date of sample	Lab Code	Particulate mater ($\mu\text{g}/\text{m}^3$)
03.12.2024	N/24/12/3-0018	456
12.12.2024	N/24/12/4-0143	432
Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment) & Lab SOP		
		Particulate mater ($\mu\text{g}/\text{m}^3$)
Permissible limits for Fugitive Emissions		600 $\mu\text{g}/\text{m}^3$


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Table No. 6

STATISTICAL AMBIENT AIR QUALITY DATA

Name of the Project : Dharmapura Iron Ore Mine (ML No. 2543)								
Name of the Client : M/s. V.N.K. Menon								
Month : Decmber, 2024								
Station Code : A I - Core Zone (Mine office)					A II - Dharmapura village			
	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}
Min.	7	9	36	20	5	11	42	22
10%	8	10	40	21	7	12	42	25
25%	9	12	43	24	9	12	46	26
50%	11	13	49	26	9	14	51	26
75%	11	16	51	29	11	15	53	27
98%	13	18	56	32	12	18	56	31
Max.	13	18	56	32	12	18	56	32
Avg.	10	14	47	26	9	14	49	27
SD	2	3	6	4	2	2	5	3
No. of obs	8				8			
Station Code : A III - Yeshwanthanagar					A - IV Ramgad			
	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}
Min.	7	11	37	20	5	11	42	22
10%	8	11	44	20	7	12	42	25
25%	10	12	47	22	9	12	46	26
50%	10	15	50	26	9	14	51	26
75%	11	15	54	27	11	15	53	27
98%	12	18	56	30	12	18	56	31
Max.	12	18	56	30	12	18	56	32
Avg.	10	14	49	25	9	14	49	27
SD	2	3	6	4	2	2	5	3
No. of obs	8				8			


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Table No.7

Name of the Client		: M/s. V.N.K. Menon			
Name of the Project		: Dharmapura Iron Ore Mine (ML No. 2543)			
Sample Collected by		: Environmental Laboratory Representative			
Particulars of sample collected		: SW1 - Ragavapura kere water SW2 - Dhananayakana kere water			
Date of sample collection		: 17.12.2024			
Issue Date		: 30.12.2024			
Ref:IS : 2296, 1982 Class C Norms (Stream Water Standards)					
Lab Code		N/24/12/4-0282	N/24/12/4-0283	Limits For Stream Water Standards	Method of Testing
Sl.No.	Parameters	SW1	SW2		
		Results			
1	Colour (Hazen Units), Max	5	15	300	IS:3025(Part-4)2021
2	pH	7.95	8.10	6.5 to 8.5	IS:3025(Part-11)2022
3	Dissolved Oxygen (as O ₂), mg/l, Max	5.2	5.1	Min 4	IS:3025(Part-38)1989RA 2019
4	Oil & Grease, mg/l	<0.1	<0.1	0.1	IS:3025(Part 39)2021
5	Total Dissolved Solids (mg/l), Max	600	592	1500	IS:3025(Part-16)2023
6	Nitrates (as NO ₃),mg/l, Max	8.00	20.12	50	IS:3025(Part-34)1988 RA 2019
7	Anionic detergents (as MBAS),mg/l, Max	<0.1	<0.1	1.0	IS:3025(Part-68)
8	Copper (as Cu),mg/l, Max	<0.005	<0.005	1.5	IS:3025(Part-2) 2019
9	Chloride (as Cl),mg/l, Max	155	130	600	IS:3025(Part-32) ;1988RA2019
10	Fluoride (as F),mg/l, Max	0.48	0.37	1.5	APHA 23rd Edition 4500F
11	Iron (as Fe),mg/l, Max	<0.005	<0.005	50	IS:3025(P-2) 2019
12	Phenolic compounds (as C ₆ H ₅ OH),mg/l, Max	<0.001	<0.001	0.005	IS:3025(P-43)Sec 1 2022
13	Selenium (as Se), mg/l, Max	<0.005	<0.005	0.05	IS:3025(P-2) 2019
14	Sulphates as SO ₄ (mg/l), Max	57.0	72.0	400	IS:3025(P-24)Sec 1 2022
15	Zinc (as Zn),mg/l, Max	<0.005	<0.005	15	IS:3025(P-2) 2019
16	Cadmium (as Cd), mg/l, Max	<0.001	<0.001	0.01	IS:3025(P-2) 2019
17	Cyanides (as CN), mg/l, Max	<0.01	<0.01	0.05	IS:3025(P-27) Sec 1 2021
18	Lead (as Pb) mg/l, Max	<0.005	<0.005	0.1	IS:3025(P-2) 2019
19	Total Arsenic as As (mg/l), Max	<0.002	<0.002	0.2	IS:3025(P-2) 2019
20	Hexavalent Chromium (as Cr ⁺⁶), mg/l, Max	<0.03	<0.03	0.05	IS:3025(P-52) 2014
21	Biochemical Oxygen Demand (as O ₂), mg/l	<3	<3	3	IS:3025(P-44) 2014
22	Total Coliform (mpn/100ml)	110	130	5000	IS:1622:1981

"END OF REPORT"

Jim

T.M. - Microbiology

Answering Concise

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