

ENVIRONMENTAL MONITORING REPORT

Project	REDI IRON ORE MINE
Location	Redi Village Vengurla Taluka, Sindhudurg Dist Maharashtra
Client	MINERALS AND METALS
Office Address	P. O. Redi, Tal Vengurla, Sindhudurga 416517, Maharashtra (India)
Monitoring Month	June -2026

ENVIRONMENTAL LABORATORY **(Unit of Mineral Engineering Services LLP)**

Recognised by MoEF&CC Under E(P) Act 1986
&

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

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ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

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TEST REPORT

Table No. 1

AMBIENT AIR QUALITY

Name of the Client : M/s. Minerals and Metals
Name of the Project : Redi Iron Ore Mine
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A1 - Core zone Within ML Area
Duration : 24 Hrs
Issue Date : 04.07.2026
Sampling & Test Method : IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	Ammonia (NH ₃), µg/m ³	Benzene (C ₆ H ₆), µg/m ³
05.06.2026	N018526061	12	13	45	23	<20	<1
06.06.2026	N006126062	9	10	38	22	<20	<1
12.06.2026	N027426062	12	15	52	30	<20	<1
13.06.2026	N005826063	14	17	48	23	<20	<1
15.06.2026	N010526063	7	15	46	25	<20	<1
16.06.2026	N015326063	11	16	40	19	<20	<1
22.06.2026	N009026064	9	12	39	18	<20	<1
23.06.2026	N013926064	11	15	35	18	<20	<1
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Report No	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	Ozone* (O ₃), µg/m ³
05.06.2026	N018526061	0.15	<0.1	<0.5	<0.5	0.22	25
06.06.2026	N006126062	<0.1	<0.1	<0.5	<0.5	0.25	20
12.06.2026	N027426062	0.12	<0.1	<0.5	<0.5	0.21	22
13.06.2026	N005826063	0.10	<0.1	<0.5	<0.5	0.25	23
15.06.2026	N010526063	0.15	<0.1	<0.5	<0.5	0.31	20
16.06.2026	N015326063	0.13	<0.1	<0.5	<0.5	0.22	21
22.06.2026	N009026064	0.17	<0.1	<0.5	<0.5	0.26	24
23.06.2026	N013926064	0.12	<0.1	<0.5	<0.5	0.25	20
NAAQS Limits for Industrial , Residential, Rural and other Areas		1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr

Note : * Parameters monitored for period of 1 hr

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



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TEST REPORT

Table No. 2

AMBIENT AIR QUALITY

Name of the Client : M/s. Minerals and Metals							
Name of the Project : Redi Iron Ore Mine							
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)							
Code & Station : A2 - Redi village (Within 200m from the ML Area)							
Duration : 24 Hrs							
Issue Date : 04.07.2026							
Sampling & Test Method : IS 5182 & Lab SOP							
Date of Sampling	Report No	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	Ammonia (NH ₃), µg/m ³	Benzene (C ₆ H ₆), µg/m ³
05.06.2026	N018226061	7	16	48	25	<20	<1
06.06.2026	N005826062	12	15	51	28	<20	<1
12.06.2026	N027126062	10	11	45	26	<20	<1
13.06.2026	N005526063	14	16	40	26	<20	<1
15.06.2026	N010226063	9	11	30	19	<20	<1
16.06.2026	N015026063	7	10	41	25	<20	<1
22.06.2026	N008726064	10	14	32	19	<20	<1
23.06.2026	N013626064	8	13	39	21	<20	<1
NAAQs Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Report No	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	Ozone* (O ₃), µg/m ³
05.06.2026	N018226061	0.11	<0.1	<0.5	<0.5	0.21	22
06.06.2026	N005826062	0.15	<0.1	<0.5	<0.5	0.26	23
12.06.2026	N027126062	<0.1	<0.1	<0.5	<0.5	0.23	21
13.06.2026	N005526063	0.13	<0.1	<0.5	<0.5	0.27	20
15.06.2026	N010226063	0.11	<0.1	<0.5	<0.5	0.20	22
16.06.2026	N015026063	0.16	<0.1	<0.5	<0.5	0.21	25
22.06.2026	N008726064	0.13	<0.1	<0.5	<0.5	0.25	26
23.06.2026	N013626064	0.10	<0.1	<0.5	<0.5	0.23	20
NAAQS Limits for Industrial , Residential, Rural and other Areas		1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr
Note : * Parameters monitored for period of 1 hr							

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TEST REPORT

Table No.3

AMBIENT AIR QUALITY

Name of the Client : M/s. Minerals and Metals
Name of the Project : Redi Iron Ore Mine
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A3 - Gaontala village
Duration : 24 Hrs
Issue Date : 04.07.2026
Sampling & Test Method : IS 5182 & Lab SOP

Date of Sampling	Report No	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	Ammonia (NH ₃), µg/m ³	Benzene (C ₆ H ₆), µg/m ³
05.06.2026	N018426061	11	13	34	18	<20	<1
06.06.2026	N006026062	10	14	50	28	<20	<1
12.06.2026	N027326062	11	13	47	26	<20	<1
13.06.2026	N005726063	9	10	48	25	<20	<1
15.06.2026	N010426063	8	9	50	28	<20	<1
16.06.2026	N015226063	10	13	42	23	<20	<1
22.06.2026	N008926064	10	14	40	22	<20	<1
23.06.2026	N013826064	12	14	31	15	<20	<1
NAAQs Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Report No	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	Ozone* (O ₃), µg/m ³
05.06.2026	N018426061	0.22	<0.1	<0.5	<0.5	0.24	20
06.06.2026	N006026062	0.11	<0.1	<0.5	<0.5	0.21	<20
12.06.2026	N027326062	0.17	<0.1	<0.5	<0.5	0.25	25
13.06.2026	N005726063	0.12	<0.1	<0.5	<0.5	0.31	20
15.06.2026	N010426063	0.16	<0.1	<0.5	<0.5	0.24	24
16.06.2026	N015226063	0.14	<0.1	<0.5	<0.5	0.22	26
22.06.2026	N008926064	0.11	<0.1	<0.5	<0.5	0.27	20
23.06.2026	N013826064	0.13	<0.1	<0.5	<0.5	0.23	23
NAAQS Limits for Industrial , Residential, Rural and other Areas		1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr

Note : * Parameters monitored for period of 1 hr

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TEST REPORT

Table No. 4

AMBIENT AIR QUALITY

Name of the Client : M/s. Minerals and Metals							
Name of the Project : Redi Iron Ore Mine							
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)							
Code & Station : A4 - Kanyalwadi village							
Duration : 24 Hrs							
Issue Date : 04.07.2026							
Sampling & Test Method : IS 5182 & Lab SOP							
Date of Sampling	Report No	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	Ammonia (NH ₃), µg/m ³	Benzene (C ₆ H ₆), µg/m ³
03.06.2026	N007226061	7	12	34	19	<20	<1
04.06.2026	N011326061	10	13	43	25	<20	<1
10.06.2026	N019326062	15	14	47	28	<20	<1
11.06.2026	N022026062	9	11	44	22	<20	<1
17.06.2026	N017926063	12	10	40	21	<20	<1
18.06.2026	N021126063	12	17	34	19	<20	<1
24.06.2026	N020626064	11	17	41	22	<20	<1
25.06.2026	N026526064	9	10	39	23	<20	<1
NAAQs Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Report No	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	Ozone* (O ₃), µg/m ³
03.06.2026	N007226061	0.18	<0.1	<0.5	<0.5	0.22	25
04.06.2026	N011326061	0.22	<0.1	<0.5	<0.5	0.24	22
10.06.2026	N019326062	0.11	<0.1	<0.5	<0.5	0.20	27
11.06.2026	N022026062	0.13	<0.1	<0.5	<0.5	0.22	23
17.06.2026	N017926063	0.21	<0.1	<0.5	<0.5	0.26	25
18.06.2026	N021126063	0.18	<0.1	<0.5	<0.5	0.23	<20
24.06.2026	N020626064	0.15	<0.1	<0.5	<0.5	0.20	22
25.06.2026	N026526064	0.11	<0.1	<0.5	<0.5	0.25	20
NAAQS Limits for Industrial , Residential, Rural and other Areas		1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr
Note : * Parameters monitored for period of 1 hr							

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TEST REPORT

Table No. 5

AMBIENT AIR QUALITY

Name of the Client : M/s. Minerals and Metals							
Name of the Project : Redi Iron Ore Mine							
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)							
Code & Station : A5 - Shiroda village							
Duration : 24 Hrs							
Issue Date : 04.07.2026							
Sampling & Test Method : IS 5182 & Lab SOP							
Date of Sampling	Report No	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)	Ammonia (NH ₃), µg/m ³	Benzene (C ₆ H ₆), µg/m ³
05.06.2026	N018326061	10	15	45	24	<20	<1
06.06.2026	N005926062	10	12	54	32	<20	<1
12.06.2026	N027226062	6	9	35	18	<20	<1
13.06.2026	N005626063	8	10	43	20	<20	<1
15.06.2026	N010326063	9	10	49	26	<20	<1
16.06.2026	N015126063	11	12	31	18	<20	<1
22.06.2026	N008826064	7	10	45	26	<20	<1
23.06.2026	N013726064	11	11	42	24	<20	<1
NAAQs Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs	400 24 Hrs	5 Annual

Date of Sampling	Report No	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	Ozone* (O ₃), µg/m ³
05.06.2026	N018326061	<0.1	<0.1	<0.5	<0.5	0.22	22
06.06.2026	N005926062	0.13	<0.1	<0.5	<0.5	0.20	24
12.06.2026	N027226062	0.22	<0.1	<0.5	<0.5	<0.2	21
13.06.2026	N005626063	0.11	<0.1	<0.5	<0.5	0.20	20
15.06.2026	N010326063	0.16	<0.1	<0.5	<0.5	0.32	25
16.06.2026	N015126063	0.14	<0.1	<0.5	<0.5	0.25	23
22.06.2026	N008826064	0.13	<0.1	<0.5	<0.5	0.22	21
23.06.2026	N013726064	0.18	<0.1	<0.5	<0.5	0.20	22
NAAQS Limits for Industrial , Residential, Rural and other Areas		1.0 24 Hrs	20 Annual	6 Annual	1 Annual	4 1 Hr	180 1 Hr

Note : * Parameters monitored for period of 1 hr

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TEST REPORT

Table No. 6

AMBIENT AIR QUALITY

Name of the Client : M/s. Minerals and Metals					
Name of the Project : Redi Iron Ore Mine					
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)					
Code & Station : A6 - Near NIMCO Gate - Tivrewadi, Redi village					
Duration : 24 Hrs					
Issue Date : 04.07.2026					
Sampling & Test Method : IS 5182 & Lab SOP					
Date of Sampling	Report No	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)
03.06.2026	N007326061	8	15	55	30
04.06.2026	N011426061	7	13	47	22
10.06.2026	N019426062	12	13	49	25
11.06.2026	N022126062	10	15	52	27
17.06.2026	N018026063	8	14	35	19
18.06.2026	N021226063	11	13	47	27
24.06.2026	N020726064	7	10	42	25
25.06.2026	N026626064	12	17	38	20
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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TEST REPORT

Table No. 7

AMBIENT AIR QUALITY

Name of the Client : M/s. Minerals and Metals					
Name of the Project : Redi Iron Ore Mine					
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)					
Code & Station : A7 - Near Primary School - sakalbhatwadi Redi village					
Duration : 24 Hrs					
Issue Date : 04.07.2026					
Sampling & Test Method : IS 5182 & Lab SOP					
Date of Sampling	Report No	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	PM ₁₀ , (µg/m ³)	PM _{2.5} , (µg/m ³)
03.06.2026	N007426061	9	11	42	23
04.06.2026	N011526061	10	13	46	25
10.06.2026	N019526062	11	16	38	19
11.06.2026	N022226062	9	12	30	18
17.06.2026	N018126063	12	18	53	27
18.06.2026	N021326063	12	15	44	22
24.06.2026	N020826064	13	17	33	19
25.06.2026	N026726064	9	10	43	24
NAAQS Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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TEST REPORT

Table No. 8

Fugitive Emission

Name of the Client		: M/s. Minerals and Metals					
Name of the Project		: Redi Iron Ore Mine					
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)					
Duration		: 08 Hrs					
Issue Date		: 04.07.2026					
Code & Station	Date of sample	Report No	Sulphur Dioxide (SO ₂), µg/m ³	Nitrogen Dioxide (NO ₂), µg/m ³	PM ₁₀ (µg/m ³)	SPM (µg/m ³)	Carbon Monoxide* (CO), mg/m ³
FA1- Unloading Point	June, 2026	No Mining Operation					
FA2 - Haulage Road							
FA3 - Loading Area							
Within in Mining Area Pollutant			SO ₂	NO ₂	RPM (PM ₁₀)	SPM (PM)	CO
Concentration in Ambient Air			120	120	250	500	4
Time Weighted Average			24 Hrs	24 Hrs	24 Hrs	24 Hrs	1 Hr
Note : * Parameters monitored for period of 1 hr							

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TEST REPORT

Table No. 9

STATISTICAL AIR QUALITY DATA

Name of the Client : M/s. Minerals and Metals												
Name of the Project : Redi Iron Ore Mine												
Month : June, 2026												
Code & Station	A1 - Core zone Within ML Area				A2 - Redi village (Within 200m from the ML Area)				A3 - Gaontala village			
	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}
Min.	7	10	35	18	7	10	30	19	8	9	31	15
10%	8	11	37	18	7	11	31	19	9	10	33	17
25%	9	13	39	19	8	11	37	21	10	12	39	21
50%	11	15	43	23	10	14	41	25	10	13	45	24
75%	12	15	47	24	11	15	46	26	11	14	49	27
98%	14	17	51	29	14	16	51	28	12	14	50	28
Max.	14	17	52	30	14	16	51	28	12	14	50	28
Avg.	11	14	43	22	10	13	41	24	10	13	43	23
SD	2	2	6	4	2	2	7	3	1	2	7	5
No. of obs	8				8				8			
Code & Station	A4 - Kanyalwadi village				A5 - Shiroda village							
	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}				
Min.	7	10	34	19	6	9	31	18				
10%	8	10	34	19	7	10	34	18				
25%	9	11	38	21	8	10	40	20				
50%	11	13	41	22	10	11	44	24				
75%	12	15	43	24	10	12	46	26				
98%	15	17	47	28	11	15	53	31				
Max.	15	17	47	28	11	15	54	32				
Avg.	11	13	40	22	9	11	43	24				
SD	2	3	5	3	2	2	7	5				
No. of obs	8				8							

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TEST REPORT

Table No. 10

Name of the Client	: M/s. Minerals and Metals
Name of the Project	: Redi Iron Ore Mine
Location	: Redi village, Vengurla taluka, Sindhudurg dist, Maharashtra
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of Sample	: Surface Water
Sample Location	: W1 - Pit water
Date of sample collection	: 05.06.2026
Date of sample receipt	: 06.06.2026
Report No	: M003626053
Issue Date	: 04.07.2026
Ref	: Environmental (P) Rules, 1986 SCHEDULE VI

Sl. No.	Sample Code	W1	Standards For Effluent Discharge of Environmental Pollutants	Method of Testing
	Parameters	Results		
1	Colour (Hazen Units), & Odour	5	--	IS:3025 (part-4)
2	Suspended Solids (mg/l), Max	20	100	IS 3025 (P-17) 2022
3	Particle size of suspended solids	Pass through 850 micron	Shall Pass through 850 micron	APHA 23rd edition
4	pH	5.82	5.5 to 9.0	IS 3025 (P-11) 2022
5	Temperature ° C	25	Shall not exceed 5° C above the receiving water temp	IS 3025 (Part 9) 2023
6	Oil & Grrase (mg/l), Max	<4.0	10	IS 3025 (P-39) 2021
7	Total Residual Chlorine (mg/l), Max	<0.1	1.0	IS 3025 (P-26) 2021
8	Ammonical Nitrogen (mg/l), Max	<0.1	50	IS 3025 (P-34 Sec 1) 2023
9	Total Kjeldahl Nitrogen (mg/l), Max	<0.1	100	IS 3025 (P-34 Sec 1) 2023
10	Free Ammonia as NH ₃ (mg/l), Max	<0.01	5.0	IS 3025 (P-34 Sec 1) 2023
11	BOD [3 days at 27°C] (mg/l), Max	<3.0	30	IS 3025 (Part 44) 2023
12	COD (mg/l), Max	22	250	IS 3025 (Part 58) 2023
13	Arsenic as As (mg/l), Max	<0.05	0.2	APHA 24th Ed.Method No.3030K
14	Mercury as Hg (mg/l), Max	<0.001	0.01	APHA 24th Ed.Method No.3030K
15	Lead as Pb (mg/l), Max	<0.05	0.1	APHA 24th Ed.Method No.3030K
16	Cadmium as Cd (mg/l), Max	<0.01	2.0	APHA 24th Ed.Method No.3030K
17	Hexavalent Chromium as Cr ⁺⁶ (mg/l), Max	<0.03	0.1	IS 3025 (P-52) 2014
18	Total Chromium as Cr(mg/l), Max	<0.01	2.0	APHA 24th Ed.Method No.3030K
19	Copper as Cu (mg/l), Max	<0.05	3.0	APHA 24th Ed.Method No.3030K
20	Zinc as Zn (mg/l), Max	<0.05	5.0	APHA 24th Ed.Method No.3030K
21	Selenium as Se (mg/l), Max	<0.05	0.05	APHA 24th Ed.Method No.3030K
22	Nickel as Ni (mg/l), Max	<0.05	3.0	APHA 24th Ed.Method No.3030K
23	Cyanide as CN (mg/l), Max	<0.01	0.2	IS 3025 (P-27) Sec 1 2021
24	Fluoride as F (mg/l), Max	<0.1	2.0	APHA 24th Edition 4500F
25	Dissolved Phosphates as PO ₄ (mg/l), Max	<0.1	5.0	IS 3025 (P-31) Sec 1 2022
26	Sulphide as S (mg/l), Max	<0.01	2.0	IS 3025 (P-29) 2022
27	Phenolic Compounds as C ₆ H ₅ OH (mg/l), Max	<0.001	1.0	IS 3025 (P-43) Sec 1 2022
28	Manganese as Mn (mg/l), Max	<0.01	2	APHA 24th Ed.Method No.3030K
29	Iron as Fe (mg/l), Max	<0.05	3	APHA 24th Ed.Method No.3030K
30	Vanadium as V (mg/l), Max	<0.01	0.2	APHA 24th Ed.Method No.3030K
31	Nitrate Nitrogen (mg/l), Max	4.1	10	IS 3025 (P-34) 1988 RA 2019

""END OF REPORT""

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TEST REPORT

Table No. 11

Name of the Client		: M/s. Minerals and Metals			
Name of the Project		: Redi Iron Ore Mine			
Location		: Redi village, Vengurla taluka, Sindhudurg dist, Maharashtra State.			
Particulars of sample collected		: W2 - Pit Discharge water, W3 - Runoff water from dump			
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)			
Date of sample collection		: 05.06.2026			
Date of sample receipt		: 06.06.2026			
Issue Date		: 04.07.2026			
Ref		: Environmental (P) Rules, 1986 SCHEDULE VI			
Report No		-	-	Standards For Effluent Discharge of Environmental Pollutants	Method of Testing
Sample code		W2	W3		
Sl. No.	Parameters	Results		Standards For Effluent Discharge of Environmental Pollutants	Method of Testing
1	Colour (Hazen Units), & Odour	No Pit Discharge No Runoff water		—	IS:3025 (part-4)
2	Suspended Solids (mg/l), Max			100	IS 3025 (P-17) 2022
3	Particle size of suspended solids			Shall Pass through 850 micron	APHA 23rd edition
4	pH			5.5 to 9.0	IS 3025 (P-11) 2022
5	Temperature °C			Shall not exceed 5°C above the receiving water temp	IS 3025 (Part 9) 2023
6	Oil & Grrase (mg/l), Max			10	IS 3025 (P-39) 2021
7	Total Residual Chlorine (mg/l), Max			1.0	IS 3025 (P-26) 2021
8	Ammonical Nitrogen (mg/l), Max			50	IS 3025 (P-34 Sec 1) 2023
9	Total Kjeldahl Nitrogen (mg/l), Max			100	IS 3025 (P-34 Sec 1) 2023
10	Free Ammonia as NH ₃ (mg/l), Max			5.0	IS 3025 (P-34 Sec 1) 2023
11	BOD [3 days at 27°C] (mg/l), Max			30	IS 3025 (Part 44) 2023
12	COD (mg/l), Max			250	IS 3025 (Part 58) 2023
13	Arsenic as As (mg/l), Max			0.2	APHA 24th Ed.Method No.3030K
14	Mercury as Hg (mg/l), Max			0.01	APHA 24th Ed.Method No.3030K
15	Lead as Pb (mg/l), Max			0.1	APHA 24th Ed.Method No.3030K
16	Cadmium as Cd (mg/l), Max			2.0	APHA 24th Ed.Method No.3030K
17	Hexavalent Chromium as Cr ⁺⁶ (mg/l), Max			0.1	IS 3025 (P-52) 2014
18	Total Chromium as Cr(mg/l), Max			2.0	APHA 24th Ed.Method No.3030K
19	Copper as Cu (mg/l), Max			3.0	APHA 24th Ed.Method No.3030K
20	Zinc as Zn (mg/l), Max			5.0	APHA 24th Ed.Method No.3030K
21	Selenium as Se (mg/l), Max			0.05	APHA 24th Ed.Method No.3030K
22	Nickel as Ni (mg/l), Max			3.0	APHA 24th Ed.Method No.3030K
23	Cyanide as CN (mg/l), Max			0.2	IS 3025 (P-27) Sec 1 2021
24	Fluoride as F (mg/l), Max			2.0	APHA 24th Edition 4500F
25	Dissolved Phosphates as PO ₄ (mg/l), Max			5.0	IS 3025 (P-31) Sec 1 2022
26	Sulphide as S (mg/l), Max			2.0	IS 3025 (P-29) 2022
27	Phenolic Compounds as C ₆ H ₅ OH (mg/l), Max			1.0	IS 3025 (P-43) Sec 1 2022
28	Manganese as Mn (mg/l), Max			2	APHA 24th Ed.Method No.3030K
29	Iron as Fe (mg/l), Max			3	APHA 24th Ed.Method No.3030K
30	Vanadium as V (mg/l), Max			0.2	APHA 24th Ed.Method No.3030K
31	Nitrate Nitrogen (mg/l), Max			10	IS 3025 (P-34) 1988 Ed. 2019

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TEST REPORT

Table No.12

Name of the Client	: M/s. Minerals and Metals
Name of the Project	: Redi Iron Ore Mine
Location	: Redi village, Vengurla taluka, Sindhudurg dist, Maharashtra State.
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Nature of Sample	: Surface Water
Sample Location	: SW1 - Kanyal tank water, SW2 - Nallah water Near Kanyalwadi SW3- Near Hanuman temple Kanyalwadi village
Date of sample collection	: 05.06.2026
Date of sample receipt	: 06.06.2026
Issue Date	: 04.07.2026
Ref : IS : 2296 Water Quality Standards	

Sl. No.	Report No	M000426061	M000526061	M000626061	Limits	Method of Testing
	Sample Code	SW1	SW2	SW3		
	Parameters	Results				
1	Colour (Hazen Units)	5	5	5	300	IS 3025 (Part 4) 2021
2	pH	6.70	6.80	6.96	6.5 to 8.5	IS 3025 (Part 11) 2022
3	Dissolved Oxygen (as O ₂), mg/l	5.80	5.60	5.80	Min 4	IS 3025 (Part 38):1989 RA 2019
4	Biochemical Oxygen Demand (as O ₂), mg/l	<3	<3	<3	Max 3	IS 3025 (Part 44) 2023
5	Total Coliform (MPN/100ml)	102	100	108	5000	IS 15185 2016 RA 2021
6	Total Dissolved Solids, (mg/l)	220	576	254	1500	IS 3025 (Part 16) 2023
7	Chloride (as Cl),mg/l	90.0	280.0	120.0	600	IS 3025 (Part 32) :1988 RA 2019
8	Sulphates as SO ₄ (mg/l)	50.0	70.0	30.0	400	APHA (24th Edition):4110B
9	Nitrates (as NO ₃),mg/l	2.70	7.00	1.50	50	IS 3025 (Part 34-Sec1) 2023
10	Fluoride (as F),mg/l	<0.1	<0.1	<0.1	1.5	IS 3025 (Part 60-Sec1) 2023
11	Copper (as Cu),mg/l	<0.0005	<0.0005	<0.0005	1.5	IS 3025 (Part 65) 2022
12	Iron (as Fe),mg/l	<0.005	<0.005	<0.005	50	IS 3025 (Part 65) 2022
13	Zinc (as Zn),mg/l	<0.005	<0.005	<0.005	15	IS 3025 (Part 65) 2022
14	Total Arsenic (as As), (mg/l)	<0.0005	<0.0005	<0.0005	0.2	IS 3025 (Part 65) 2022
15	Lead (as Pb), mg/l	<0.0005	<0.0005	<0.0005	0.1	IS 3025 (Part 65) 2022
16	Cadmium (as Cd), mg/l,	<0.0005	<0.0005	<0.0005	0.01	IS 3025 (Part 65) 2022
17	Hexavalent Chromium (as Cr ⁺⁶),mg/l,	<0.03	<0.03	<0.03	0.05	IS 3025 (Part 52):2019 RA 2023
18	Selenium (as Se), mg/l	<0.0005	<0.0005	<0.0005	0.05	IS 3025 (Part 65) 2022
19	Cyanide (as CN), mg/l,	<0.01	<0.01	<0.01	0.05	IS 3025 (Part 27/Sec1) 2021
20	Phenolic compounds (as C ₆ H ₅ OH),mg/l	<0.001	<0.001	<0.001	0.005	IS 3025 (Part 43/Sec1) 2022
21	Anionic detergents (as MBAS),mg/l	<0.1	<0.1	<0.1	1.0	IS 3025 (Part 68) 2023

Note : Class-C: Drinking water with conventional treatment followed by disinfection.

""END OF REPORT""


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TEST REPORT

Table No. 13

Name of the Client		: M/s. Minerals and Metals		
Name of the Project		: Redi Iron Ore Mine		
Sample Location		: STP1 - Sewage Treatment Plant		
Date of sample collection		: 05.06..2026		
Date of sample receipt		: 06.06..2026		
Report no		: M000726061		
Issue Date		: 04.07..2026		
Ref		: Schedule -1 Sl.No-2 of CTO		
Sample code		STP1		
Sl. No.	Parameters	Results	Standards	Method of Testing
1	pH	6.95	-	IS 3025 (P-11) 2022
2	Biochemical Oxygen Demand BOD ₃ 27 ^o C, mg/l	25	<30	IS 3025 (Part 44) 2023
3	Total Suspended Solids, at 105 ^o C, mg/l	28	<50	IS 3025 (P-17) 2022
4	Chemical Oxygen Demand (COD) (mg/l)	50	<100	IS 3025 (Part 58) 2023

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