

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	November -2025

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	: 03.12.2025
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
07.11.2025.	N019725112	6	9	53	26	<20	<1
08.11.2025	N008425113	8	11	37	18	<20	<1
14.11.2025	N032825113	6	9	40	22	<20	<1
15.11.2025	N005125114	8	11	44	25	<20	<1
17.11.2025	N010725114	11	13	45	26	<20	<1
18.11.2025	N016425114	8	14	38	20	<20	<1
24.11.2025	N012225115	7	9	37	18	<20	<1
25.11.2025	N018625115	9	10	47	25	<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
07.11.2025.	N019725112	0.11	<0.1	<0.5	<0.5	0.27	23
08.11.2025	N008425113	0.13	<0.1	<0.5	<0.5	0.38	23
14.11.2025	N032825113	0.16	<0.1	<0.5	<0.5	0.25	26
15.11.2025	N005125114	0.22	<0.1	<0.5	<0.5	0.21	22
17.11.2025	N010725114	0.25	<0.1	<0.5	<0.5	0.38	20
18.11.2025	N016425114	0.15	<0.1	<0.5	<0.5	0.31	21
24.11.2025	N012225115	0.27	<0.1	<0.5	<0.5	0.42	25
25.11.2025	N018625115	0.16	<0.1	<0.5	<0.5	0.38	30
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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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 : 03.12.2025
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
07.11.2025.	N019125112	10	14	53	31	<20	<1
08.11.2025	N007825113	9	11	47	25	<20	<1
14.11.2025	N032025113	6	9	34	18	<20	<1
15.11.2025	N004325114	12	16	51	27	<20	<1
17.11.2025	N009925114	9	10	43	24	<20	<1
18.11.2025	N015625114	12	14	49	26	<20	<1
24.11.2025	N011625115	9	11	54	30	<20	<1
25.11.2025	N018025115	9	16	44	22	<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
07.11.2025.	N019125112	0.13	<0.1	<0.5	<0.5	0.29	22
08.11.2025	N007825113	0.17	<0.1	<0.5	<0.5	0.33	26
14.11.2025	N032025113	0.21	<0.1	<0.5	<0.5	0.25	28
15.11.2025	N004325114	0.23	<0.1	<0.5	<0.5	0.21	24
17.11.2025	N009925114	0.15	<0.1	<0.5	<0.5	0.29	30
18.11.2025	N015625114	0.11	<0.1	<0.5	<0.5	0.21	23
24.11.2025	N011625115	0.17	<0.1	<0.5	<0.5	0.26	25
25.11.2025	N018025115	0.19	<0.1	<0.5	<0.5	0.32	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.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 - Gaontaia village
Duration	: 24 Hrs
Issue Date	: 03.12.2025
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
07.11.2025.	N019325112	8	13	51	28	<20	<1
08.11.2025	N008025113	12	18	56	30	<20	<1
14.11.2025	N032225113	9	13	53	27	<20	<1
15.11.2025	N004525114	12	15	54	25	<20	<1
17.11.2025	N010125114	11	13	46	22	<20	<1
18.11.2025	N015825114	7	11	50	27	<20	<1
24.11.2025	N011825115	10	12	44	24	<20	<1
25.11.2025	N018225115	9	11	38	19	<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
07.11.2025.	N019325112	0.22	<0.1	<0.5	<0.5	0.28	21
08.11.2025	N008025113	0.16	<0.1	<0.5	<0.5	0.26	23
14.11.2025	N032225113	0.13	<0.1	<0.5	<0.5	0.34	25
15.11.2025	N004525114	0.15	<0.1	<0.5	<0.5	0.28	22
17.11.2025	N010125114	0.21	<0.1	<0.5	<0.5	0.29	20
18.11.2025	N015825114	0.19	<0.1	<0.5	<0.5	0.31	21
24.11.2025	N011825115	0.14	<0.1	<0.5	<0.5	0.22	24
25.11.2025	N018225115	0.21	<0.1	<0.5	<0.5	0.35	28
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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Table No. 4

AMBIENT AIR QUALITY

Name of the Client : M/s. Minerals and Metals
Name of the Project : Redl Iron Ore Mine
Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP)
Code & Station : A4 - Kanyalwadi village
Duration : 24 Hrs
Issue Date : 03.12.2025
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
07.11.2025.	N019425112	9	11	53	28	<20	<1
08.11.2025	N008125113	7	9	50	27	<20	<1
14.11.2025	N032325113	9	11	47	25	<20	<1
15.11.2025	N004625114	10	15	56	29	<20	<1
17.11.2025	N010225114	9	13	51	27	<20	<1
18.11.2025	N015925114	10	12	46	25	<20	<1
24.11.2025	N011925115	8	9	39	22	<20	<1
25.11.2025	N018325115	8	11	50	28	<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
07.11.2025.	N019425112	0.11	<0.1	<0.5	<0.5	0.42	23
08.11.2025	N008125113	0.16	<0.1	<0.5	<0.5	0.33	25
14.11.2025	N032325113	0.18	<0.1	<0.5	<0.5	0.25	24
15.11.2025	N004625114	0.14	<0.1	<0.5	<0.5	0.21	28
17.11.2025	N010225114	0.23	<0.1	<0.5	<0.5	0.34	30
18.11.2025	N015925114	0.11	<0.1	<0.5	<0.5	0.46	26
24.11.2025	N011925115	0.15	<0.1	<0.5	<0.5	0.35	25
25.11.2025	N018325115	0.21	<0.1	<0.5	<0.5	0.29	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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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 : 03.12.2025
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
07.11.2025.	N019225112	7	9	38	19	<20	<1
08.11.2025	N007925113	9	11	45	26	<20	<1
14.11.2025	N032125113	9	12	40	22	<20	<1
15.11.2025	N004425114	6	9	36	18	<20	<1
17.11.2025	N010025114	9	11	53	27	<20	<1
18.11.2025	N015725114	10	14	43	23	<20	<1
24.11.2025	N011725115	9	10	47	26	<20	<1
25.11.2025	N018125115	7	11	37	20	<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
07.11.2025.	N019225112	0.28	<0.1	<0.5	<0.5	0.28	25
08.11.2025	N007925113	0.11	<0.1	<0.5	<0.5	0.42	22
14.11.2025	N032125113	0.15	<0.1	<0.5	<0.5	0.27	23
15.11.2025	N004425114	0.18	<0.1	<0.5	<0.5	0.26	28
17.11.2025	N010025114	0.12	<0.1	<0.5	<0.5	0.32	26
18.11.2025	N015725114	0.16	<0.1	<0.5	<0.5	0.28	22
24.11.2025	N011725115	0.19	<0.1	<0.5	<0.5	0.21	20
25.11.2025	N018125115	0.21	<0.1	<0.5	<0.5	0.33	25
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 : 03.12.2025					
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)
07.11.2025.	N019525112	11	18	56	28
08.11.2025	N008225113	10	12	54	25
14.11.2025	N032425113	12	15	57	30
15.11.2025	N004725114	9	13	52	27
17.11.2025	N010325114	10	12	50	26
18.11.2025	N016025114	9	13	48	23
24.11.2025	N012025115	10	15	44	23
25.11.2025	N018425115	12	14	55	30
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 : Redl Iron Ore Mine Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services LLP) Code & Station : A7 - Near Primary School - sakalhatwadi Redi village Duration : 24 Hrs Issue Date : 03.12.2025 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)
07.11.2025	N019625112	9	10	56	28
08.11.2025	N008325113	11	15	53	26
14.11.2025	N032525113	12	16	49	27
15.11.2025	N004825114	10	12	43	25
17.11.2025	N010425114	11	15	52	28
18.11.2025	N016125114	7	13	45	30
24.11.2025	N012125115	9	11	33	20
25.11.2025	N018525115	10	13	51	28
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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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		: 03.12.2025					
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	14.11.2025	N032925113	7	9	122	256	0.25
	17.11.2025	N010825114	10	11	135	245	0.31
FA2 - Haulage Road	15.11.2025	N005225114	7	9	128	138	0.22
	18.11.2025	N016525114	10	12	138	162	0.36
FA3 - Loading Area	14.11.2025	N033025113	9	11	125	125	0.24
	17.11.2025	N010925114	13	18	152	154	0.22
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 : November, 2025												
Code & Station	A1 - Core zone Within ML Area				A2 - Redl 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.	6	9	37	18	6	9	34	18	7	11	38	19
10%	6	9	37	18	8	10	40	21	8	11	42	21
25%	7	9	38	20	9	11	44	24	9	12	46	24
50%	8	11	42	24	9	13	48	26	10	13	51	26
75%	8	12	46	25	11	15	52	28	11	14	53	27
98%	11	14	52	26	12	16	54	30	12	18	56	30
Max.	11	14	53	26	12	16	54	31	12	18	56	30
Avg.	8	11	43	23	10	13	47	25	10	13	49	25
SD	2	2	6	3	2	3	7	4	2	2	6	4
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	9	39	22	8	9	36	18				
10%	8	9	44	24	7	9	37	19				
25%	8	11	47	25	7	10	38	20				
50%	9	11	50	27	9	11	42	23				
75%	9	12	52	28	9	11	46	26				
98%	10	15	56	29	10	14	52	27				
Max.	10	15	56	29	10	14	53	27				
Avg.	9	11	49	26	8	11	42	23				
SD	1	2	5	2	1	2	6	3				
No. of obs	8				8							

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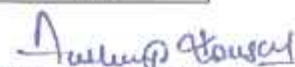
TEST REPORT

Table No. 10

NOISE LEVEL DATA

Report No ; ELMES092511

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			
Particulars of sample collected	: Sound Levels			
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services LLP)			
Issue Date	: 03.12.2025			
Sampling & Test Method	: IS:9989			
Code No.	Monitoring stations	Date of Monitoring	Day	Night
			L _{eq}	L _{eq}
Bufferzone				
N1	Redi village	14.11.2025	50.2	42.1
N2	Bombdojwajici wadi	15.11.2025	43.2	37.2
N3	Gaontala village	14.11.2025	49.3	40.2
N4	Kanyalwadi village	14.11.2025	48.5	40.9
N5	Shiroda village	15.11.2025	46.8	41.3
N6	Tiroda village	15.11.2025	46.7	39.7
Permissible Limits of Ambient Noise Levels as per CPCB Guidelines				
			Leq. Limit dB(A)	
			Day	Night
Residential area			55	45
Code No.	Monitoring stations	Date of Monitoring	Day	Night
			L _{eq}	L _{eq}
Bufferzone				
N7	Near NIMCO Gate - Tivrewadi, Redi village	15.11.2025	62.5	48.2
N8	Near Primary School - sakalhatwadi, Redi village	15.11.2025	58.3	45.1
Permissible Limits of Ambient Noise Levels as per CPCB Guidelines				
			Leq. Limit dB(A)	
			Day	Night
Commerecial area			65	55
Code No.	Monitoring stations	Date of Monitoring	Day	Night
			L _{eq}	L _{eq}
Corezone				
N9	Near Mine office	17.11.2025	55.6	42.3
Permissible Limits of Ambient Noise Levels as per CPCB Guidelines				
			Leq. Limit dB(A)	
			Day	Night
Industrial areas			75	70


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TEST REPORT

Table No. 11

NOISE LEVEL DATA

Report No ; ELMES102501

Name of the Client		: M/s. Minerals and Metals		
Name of the Project		: Redi Iron Ore Mine		
Particulars of sample collected		: Sound Levels		
Location		: Redi village, Vengurla taluka, Sindhudurg dist, Maharashtra		
Sample Collected by		: Environmental Laboratory (Unit of Mineral Engineering Services LLP)		
Issue Date		: 03.12.2025		
Sampling & Test Method		: IS:9989		
Code No.	Monitoring stations	Date of Monitoring	Day	Remarks
			L _{eq}	
Heavy Earth Moving Machineries				
N1	Excavator EC480DL	17.11.2025	58.4	During operation inside of the cabin
			60.2	During operation 5mts outside of the cabin
N2	Dozer RD-0014	17.11.2025	55.8	During operation inside of the cabin
			61.5	During operation 5mts outside of the cabin
Permissible limits as per ILO Code of Practice For Unprotected ear - 8 hrs working shift Warning limit - 85 dB(A) Danger limit - 90 dB(A) Worker not to be exposed for more than 115 dB(A) With ear protection - 130 dB(A) 'Impulse' or 120 dB(A) 'Fast' No entry when noise level exceeds 140 dB(A)				

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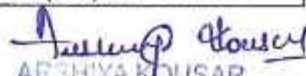
TEST REPORT

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
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	: 15.11.2025
Date of sample receipt	: 27.11.2025
Report No	: M002025114
Issue Date	: 03.12.2025
Ref	: Environmental (P) Rules, 1986 SCHEDULE VI

Sl. No.	Parameters	Results	Standards For Effluent Discharge of Environmental Pollutants	Method of Testing
1	Colour (Hazen Units), & Odour	5	—	IS:3025 (part-4)
2	Suspended Solids (mg/l), Max	15	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	5.60	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 & Grease (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	28	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	1.6	10	IS 3025 (P-34) 1988 RA 2019

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			
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		: 15.11.2025			
Date of sample receipt		: 27.11.2025			
Issue Date		: 03.12.2025			
Ref		: Environmental (P) Rules, 1986 SCHEDULE VI			
Report No		M002125114	-	Standards For Effluent	
Sample code		W2	W3	Discharge of Environmental Pollutants	
Sl. No.	Parameters	Results		Method of Testing	
1	Colour (Hazen Units), & Odour	5		-	IS:3025 (part-4)
2	Suspended Solids (mg/l), Max	10		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	5.67		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 & Grase (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	24		250	IS 3025 (Part 56) 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	1.2		10	IS 3025 (P-34) 1988 RA 2019

"END OF REPORT"

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TEST REPORT

Table No.14


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 Kanyawadi SW3- Near Hanuman temple Kanyawadi village
Date of sample collection	: 15.11.2025
Date of sample receipt	: 17.11.2025
Issue Date	: 03.12.2025
Ref : IS : 2296 Water Quality Standards	

Sl. No.	Report No	M002425114	M002525114	M002625114	Limits	Method of Testing
	Sample Code	SW1	SW2	SW3		
	Parameters	Results				
1	Colour (Hazen Units)	1	1	<1	300	IS 3025 (Part 4) 2021
2	pH	6.90	6.52	6.70	6.5 to 8.5	IS 3025 (Part 11) 2022
3	Dissolved Oxygen (as O ₂), mg/l	5.50	5.60	5.60	Min 4	IS 3025 (Part 38):1988 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)	75	82	46	5000	IS 15185 2016 RA 2021
6	Total Dissolved Solids, (mg/l)	124	162	98	1500	IS 3025 (Part 16) 2023
7	Chloride (as Cl), mg/l	38.0	55.0	24.0	600	IS 3025 (Part 32) :1988 RA 2019
8	Sulphates as SO ₄ (mg/l)	30.0	38.0	22.0	400	APHA (24th Edition):4110B
9	Nitrates (as NO ₃), mg/l	2.60	3.00	1.56	50	IS 3025 (Part 34-Sect1) 2023
10	Fluoride (as F), mg/l	<0.1	<0.1	<0.1	1.5	IS 3025 (Part 60-Sect1) 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 65) 2023

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

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TEST REPORT

Table No. 15

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		: 15.11.2025		
Date of sample receipt		: 17.11.2025		
Report no		: M002725114		
Issue Date		: 03.12.2025		
Ref		: Schedule -1 Sl.No-2 of CTO		
Sample code		STP1		
Sl. No.	Parameters	Results	Standards	Method of Testing
1	pH	6.65	-	IS 3025 (P-11) 2022
2	Biochemical Oxygen Demand BOD ₅ 27 ^o C, mg/l	25	<30	IS 3025 (Part 44) 2023
3	Total Suspended Solids, at 105 ^o C, mg/l	18	<50	IS 3025 (P-17) 2022
4	Chemical Oxygen Demand (COD) (mg/l)	62	<100	IS 3025 (Part 58) 2023

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