

ENVIRONMENTAL MONITORING REPORT

April, 2022

PROJECT: RAMANADURGA IRON ORE MINE

**ML NO. 2141
Dharmapura Village
Sandur Taluk, Ballari District,
Karnataka**

Lessee

M/S. Sri. KUMARASWAMY MINERAL EXPORTS PVT. LTD.,

**D. No. 462, SMIORE Colony,
Near Fire Station, Kudligi Road
SANDUR - 583119
BELLARY, KARNATAKA**

CONSULTANTS

MINERAL ENGINEERING SERVICES

Mining & Environmental Engineers

25/XXV, Club Road, BALLARI - 583 103.

**Tel/Fax:08392-267421
E-mail:mes_msraju@yahoo.co.uk**

LIST OF TABLES

SL. NO.	PARTICULARS	TABLE NO.
1	Test Report of Ambient Air Quality	1 to 5
2	Test Report of Fugitive Emission	6
3	Statistical Air Quality	7
4	Water Analysis Report As per IS 2296	8
5	Water Test Report As per IS 10500	9
6	Noise Level data	10



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 1

TEST REPORT OF AMBIENT AIR QUALITY

MES/AQ/TR/06/00

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)
 Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
 Station at & Code : A - I, Dharmapura
 Duration : 24 Hrs
 Date of Report : 06.05.2022
 Reference IS 5182 Report No : MES/SS/ARN/153

Date of Sampling	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
08.04.2022	6	10	48	35	<20	<1
09.04.2022	8	11	46	28	<20	<1
13.04.2022	7	13	50	27	<20	<1
14.04.2022	12	15	44	24	<20	<1
22.04.2022	11	13	54	26	<20	<1
23.04.2022	9	15	46	22	<20	<1
25.04.2022	10	16	56	30	<20	<1
26.04.2022	14	14	50	28	<20	<1
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	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
08.04.2022	0.13	<0.5	<0.5	<0.5	0.35	28
09.04.2022	0.11	<0.5	<0.5	<0.5	0.32	26
13.04.2022	0.09	<0.5	<0.5	<0.5	0.36	26
14.04.2022	0.14	<0.5	<0.5	<0.5	0.35	20
22.04.2022	0.11	<0.5	<0.5	<0.5	0.29	27
23.04.2022	0.09	<0.5	<0.5	<0.5	0.26	20
25.04.2022	0.09	<0.5	<0.5	<0.5	0.28	26
26.04.2022	0.13	<0.5	<0.5	<0.5	0.25	22
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


 (M.R. DURGA PRASAD)
 GOVT. ANALYST


 (M.S. RAJU)
 HEAD OF LABORATORY



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 2

TEST REPORT OF AMBIENT AIR QUALITY

MES/AQ/TR/06/00

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)
 Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
 Station at & Code : A - II, Yeshwanthanagar
 Duration : 24 Hrs
 Date of Report : 06.05.2022
 Reference IS 5182 Report No : MES/SS/ARN/154

Date of Sampling	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
08.04.2022	11	13	48	27	<20	<1
09.04.2022	10	14	58	31	<20	<1
13.04.2022	8	12	54	29	<20	<1
14.04.2022	9	14	51	28	<20	<1
22.04.2022	12	15	47	29	<20	<1
23.04.2022	14	15	50	29	<20	<1
25.04.2022	12	13	60	30	<20	<1
26.04.2022	10	12	53	28	<20	<1
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	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
08.04.2022	0.14	<0.5	<0.5	<0.5	0.29	23
09.04.2022	0.12	<0.5	<0.5	<0.5	0.27	25
13.04.2022	0.10	<0.5	<0.5	<0.5	0.31	27
14.04.2022	0.12	<0.5	<0.5	<0.5	0.34	26
22.04.2022	0.15	<0.5	<0.5	<0.5	0.30	25
23.04.2022	0.13	<0.5	<0.5	<0.5	0.32	21
25.04.2022	0.12	<0.5	<0.5	<0.5	0.36	28
26.04.2022	0.09	<0.5	<0.5	<0.5	0.35	26
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

(M.R. DURGA PRASAD)
 GOVT. ANALYST

(M.S. RAJU)
 HEAD OF LABORATORY



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 3

TEST REPORT OF AMBIENT AIR QUALITY

MES/AQ/TR/06/00

Name of the Project	: Ramanadurga Iron Ore Mine (ML No. 2141)					
Name of the Client	: M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd					
Station at & Code	: A - III, Sushila Nagar village					
Duration	: 24 Hrs					
Date of Report	: 06.05.2022					
Reference IS 5182	Report No : MES/SS/ARN/142					
Date of Sampling	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
04.04.2022	6	12	45	34	<20	<1
05.04.2022	8	10	55	33	<20	<1
15.04.2022	8	12	57	30	<20	<1
16.04.2022	9	10	53	31	<20	<1
18.04.2022	11	16	46	33	<20	<1
19.04.2022	12	16	50	29	<20	<1
27.04.2022	11	13	42	25	<20	<1
28.04.2022	9	14	46	29	<20	<1
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	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
04.04.2022	0.09	<0.5	<0.5	<0.5	0.28	27
05.04.2022	0.09	<0.5	<0.5	<0.5	0.25	28
15.04.2022	0.10	<0.5	<0.5	<0.5	0.29	20
16.04.2022	0.13	<0.5	<0.5	<0.5	0.27	26
18.04.2022	0.14	<0.5	<0.5	<0.5	0.26	29
19.04.2022	0.12	<0.5	<0.5	<0.5	0.29	26
27.04.2022	0.15	<0.5	<0.5	<0.5	0.15	26
28.04.2022	0.09	<0.5	<0.5	<0.5	0.30	25
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


(M.R. DURGA PRASAD)
GOVT. ANALYST


(M.S. RAJU)
HEAD OF LABORATORY



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 4

TEST REPORT OF AMBIENT AIR QUALITY

MES/AQ/TR/06/00

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)
 Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
 Station at & Code : A - IV Sandur Town
 Duration : 24 Hrs
 Date of Report : 06.05.2022
 Reference IS 5182 Report No : MES/SS/ARN/174

Date of Sampling	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
08.04.2022	9	12	46	29	<20	<1
09.04.2022	12	16	58	29	<20	<1
13.04.2022	10	14	55	28	<20	<1
14.04.2022	9	13	47	25	<20	<1
22.04.2022	13	16	51	29	<20	<1
23.04.2022	11	16	53	25	<20	<1
25.04.2022	10	14	49	26	<20	<1
26.04.2022	9	13	55	27	<20	<1
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	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
08.04.2022	0.10	<0.5	<0.5	<0.5	0.31	28
09.04.2022	0.09	<0.5	<0.5	<0.5	0.30	26
13.04.2022	0.12	<0.5	<0.5	<0.5	0.24	26
14.04.2022	0.07	<0.5	<0.5	<0.5	0.23	29
22.04.2022	0.14	<0.5	<0.5	<0.5	0.33	22
23.04.2022	0.09	<0.5	<0.5	<0.5	0.24	26
25.04.2022	0.13	<0.5	<0.5	<0.5	0.26	21
26.04.2022	0.11	<0.5	<0.5	<0.5	0.27	20
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

(M.R. DURGA PRASAD)
 GOVT. ANALYST

(M.S. RAJU)
 HEAD OF LABORATORY



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 5

TEST REPORT OF AMBIENT AIR QUALITY

MES/AQ/TR/06/00

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)
 Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
 Station at & Code : A - V Core zone Within ML Area
 Duration : 24 Hrs
 Date of Report : 06.05.2022
 Reference IS 5182 Report No : MES/SS/ARN/173

Date of Sampling	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
08.04.2022	16	20	48	27	<20	<1
09.04.2022	12	15	52	28	<20	<1
13.04.2022	15	17	55	30	<20	<1
14.04.2022	12	14	54	29	<20	<1
22.04.2022	10	12	53	27	<20	<1
23.04.2022	15	16	56	29	<20	<1
25.04.2022	14	17	45	26	<20	<1
26.04.2022	13	15	53	35	<20	<1
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	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
08.04.2022	0.12	<0.5	<0.5	<0.5	0.36	30
09.04.2022	0.06	<0.5	<0.5	<0.5	0.32	22
13.04.2022	0.05	<0.5	<0.5	<0.5	0.33	26
14.04.2022	0.10	<0.5	<0.5	<0.5	0.25	24
22.04.2022	0.14	<0.5	<0.5	<0.5	0.29	25
23.04.2022	0.12	<0.5	<0.5	<0.5	0.29	20
25.04.2022	0.09	<0.5	<0.5	<0.5	0.25	25
26.04.2022	0.05	<0.5	<0.5	<0.5	0.34	27
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


 (M.R. DURGA PRASAD)
 GOVT. ANALYST


 (M.S. RAJU)
 HEAD OF LABORATORY



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 6

Test Report of Fugitive Emission

MES/AQ/TR/06/00

Name of the Client	: M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
Project	: Ramanadurga Iron Ore Mine (ML No. 2141)
Station at & Code	: A - VI, Loading point
Duration	: 08 Hrs
Date of Report	: 06.05.2022
Report No	: MES/SS/ARN/175

Date of sample	Particulate mater ($\mu\text{g}/\text{m}^3$)
08.04.2022	423
13.04.2022	522

Station at & Code	: A - VII, Crushing & Screening
Duration	: 08 Hrs
Date of Report	: 06.05.2022

Date of sample	Particulate mater ($\mu\text{g}/\text{m}^3$)
09.04.2022	564
14.04.2022	597

Station at & Code	: A - VIII, Dumping point
Duration	: 08 Hrs
Date of Report	: 06.05.2022

Date of sample	Particulate mater ($\mu\text{g}/\text{m}^3$)
08.04.2022	592
13.04.2022	563

Station at & Code	: A - IX, Haulage Road
Duration	: 08 Hrs
Date of Report	: 06.05.2022

Date of sample	Particulate mater ($\mu\text{g}/\text{m}^3$)
09.04.2022	587
14.04.2022	496

Ref : Environmental (Protection) Rules, 2010 (Sixth Amendment)

Particulate mater ($\mu\text{g}/\text{m}^3$)

Permissible limits for Fugitive Emissions

1200 $\mu\text{g}/\text{m}^3$


(M.R. DURGA PRASAD)
GOVT. ANALYST


(M.S. RAJU)
HEAD OF LABORATORY



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 7

STATISTICAL AIR QUALITY DATA

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd

Month : April, 2022

Station Code : A - I, Dharmapura					A - II, Yeshwanthanagar				A - III, Sushila Nagar 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	10	44	22	8	12	47	27	6	10	42	25
10%	7	11	45	24	9	12	48	28	7	10	44	28
25%	8	13	46	26	10	13	50	28	8	12	46	29
50%	10	14	49	28	11	14	52	29	9	13	48	31
75%	11	15	51	29	12	14	55	29	11	15	54	33
98%	14	16	56	34	14	15	60	31	12	16	57	34
Max.	14	16	56	35	14	15	60	31	12	16	57	34
Avg.	10	13	49	28	11	14	53	29	9	13	49	31
SD	3	2	4	4	2	1	5	1	2	2	5	3
No. of obs	8				8				8			
Station Code : A - IV Sandur Town					A - V Core zone Within ML Area							
	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}				
Min.	9	12	46	25	10	12	45	26				
10%	9	13	47	25	11	13	47	27				
25%	9	13	49	26	12	15	51	27				
50%	10	14	52	28	14	16	53	29				
75%	11	16	55	29	15	17	54	29				
98%	13	16	58	29	16	20	56	34				
Max.	13	16	58	29	16	20	56	35				
Avg.	10	14	52	27	13	16	52	29				
SD	2	2	4	2	2	2	4	3				
No. of obs	8				8							


(M.R. DURGA PRASAD)
GOVT. ANALYST


(M.S. RAJU)
HEAD OF LABORATORY

25/XXV, Club Road, Ballari-583 103, Karnataka. Landline No. :08392-267421

E-mail : mes_msraju@yahoo.co.uk / mesbly25@gmail.com

Website : www.envtest.in



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 8

WATER ANALYSIS REPORT

MES/W/FTR/12/00

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)
Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
Month : April, 2022
Date of sampling : 08.04.2022
Date of Report : 06.05.2022

Ref:IS : 2296, 1982 Class C Norms (Stream Water Standards)

Sl.No.	Parameters	Method of Testing	Limits For Stream Water Standards	Result	
				SW1	SW2
i	pH	IS:3025(Part-11)	6.5 to 8.5	No Flow	No Flow
ii	Dissolved Oxygen (as O ₂), mg/l, Min	IS:3025(Part-38)	4		
iii	Biochemical Oxygen Demand (as O ₂), mg/l, Max	IS:3025(Part-44)	3		
iv	Total Coliform (mpn/100ml), Max	IS:1622	5000		
v	Colour (Hazen Units), Max	IS:3025(Part-4)	300		
vi	Fluoride (as F),mg/l, Max	IS:3025(Part-60)	1.5		
vii	Cadmium (as Cd), mg/l, Max	IS:3025(Part-41)	0.01		
viii	Chloride (as Cl),mg/l, Max	IS:3025(Part-32)	600		
ix	Chromium (as Cr ⁺⁶), mg/l, Max	IS:3025(Part-52)	0.05		
x	Cyanides (as CN), mg/l, Max	IS:3025(Part-27)	0.05		
xi	Total Dissolved Solids (mg/l), Max	IS:3025(Part-16)	1500		
xii	Selenium (as Se), mg/l, Max	IS:3025(Part-56)	0.05		
xiii	Sulphates as SO ₄ (mg/l), Max	IS:3025(Part-24)	400		
xiv	Lead (as Pb) mg/l, Max	IS:3025(Part-47)	0.1		
xv	Copper (as Cu),mg/l, Max	IS:3025(Part-42)	1.5		
xvi	Arsenic as As (mg/l), Max	IS:3025(Part-37)	0.2		
xvii	Iron (as Fe),mg/l, MAX	IS:3025(Part-53)	50		
xviii	Phenolic compounds (as C ₆ H ₅ OH),mg/l, Max	IS:3025(Part-43)	0.005		
xix	Zinc (as Zn),mg/l, Max	IS:3025(Part-49)	15		
xx	Insecticides, mg/l, Max	APHA 21 st	Absent		
xxi	Anionic detergents (as MBAS),mg/l, Max	Annex K of IS 13248	1		
xxii	Oil and grease, mg/l, Max	IS:3025(Part-39)	0.1		
xxiii	Nitrates (as NO ₃),mg/l, Max	IS:3025(Part-34)	50		
xxiv	Alpha Emitters (µcurie/ml), Max	APHA 21 st	10 ⁻⁹		
xxv	Beta Emitters (µcurie/ml), Max	APHA 21 st	10 ⁻⁸		

SAMPLE TYPE :

SW1 - Nari Halla Up Stream water

SW2 - Nari Halla Down Stream water

Samples Collected & Analysed by Mineral Engineering Services, Ballari

Note : NA - Not Analysed

(M.R. DURGA PRASAD)
GOVT. ANALYST

(M.S.RAJU)
HEAD OF LABORATORY

25/XXV, Club Road, Ballari-583 103, Karnataka. Landline No. :08392-267421

E-mail : mes_msraju@yahoo.co.uk / mesbly25@gmail.com

Website : www.envtest.in



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 9

WATER TEST REPORT

MES/WTR/11/00

Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)
Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
Month : April, 2022
Date of sampling : 08.04.2022
Date of Report : 06.05.2022
: MES/SS/WRN/49&50

Ref : IS:10500-2012 Norms (Drinking Water Standards)

Sl. No.	Parameters	Method of Testing	Desirable Limits	Permissible Limits	Result			
					GW1	GW2	GW3	GW4
i	Colour (Hazen Units), Max	IS:3025 (Part-4)	5	15	2	2	2	<1
ii	Odour	IS:3025 (Part-5)	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
iii	pH	IS:3025 (Part-11)	6.5 to 8.5	6.5 - 8.5	6.83	7.27	7.91	8.33
iv	Taste	IS:3025 (Part- 8)	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
v	Turbidity, NTU, Max	IS:3025 (Part-10)	1	5	3.9	1.8	2.7	2.5
vi	Total Dissolved Solids, mg/l, Max	IS:3025 (Part-16)	500	2000	1276	1566	1082	66
vii	Aluminium (as Al), Max	IS:3025 (Part-55)	0.03	0.2	<0.01	<0.01	<0.01	<0.01
viii	Ammonia (as total Ammonia -N), mg/l, Max	IS:3025 (Part-34)	0.5	0.5	<0.1	<0.1	<0.1	<0.1
ix	Anionic Detergents (as MBAS), mg/l, Max	Annex K of IS:13428	0.2	1.0	<0.1	<0.1	<0.1	<0.1
x	Barium (as Ba), mg/l, Max	IS:15302 & APHA 21 st	0.7	0.7	<0.05	<0.05	<0.05	<0.05
xi	Boron (as B), mg/l, Max	IS:3025 (Part-57)	0.5	1	<0.1	<0.1	<0.1	<0.1
xii	Calcium (as Ca), mg/l, Max	IS:3025 (Part-40)	75	200	108	96	96	8
xiii	Chloramines (as Cl ₂), mg/l, Max	APHA 21 st	4.0	4.0	NA	NA	NA	NA
xiv	Chloride as Cl (mg/l), mg/l, Max	IS:3025 (Part-32)	250	1000	295	445	235	14
xv	Copper (as Cu), mg/l, Max	IS:3025 (Part-42)	0.05	1.5	<0.01	<0.01	<0.01	<0.01
xvi	Fluoride (as F), mg/l, Max	IS:3025 (Part-60)	1	1.5	0.60	0.71	0.67	<0.1
xvii	Residual, Free Chlorine, mg/l, Max	IS:3025 (Part-26)	0.2	1	<0.1	<0.1	<0.1	<0.1
xviii	Iron (as Fe), mg/l, Max	IS:3025 (Part-53)	1.0	1.0	<0.05	<0.05	<0.05	<0.05
xix	Magnesium (as Mg), mg/l, Max	IS:3025 (Part-46)	30	100	90.0	90.0	94.8	2.4
xx	Manganese (as Mn), mg/l, Max	IS:3025 (Part-59)	0.1	0.3	<0.03	<0.03	<0.03	<0.03
xxi	Mineral Oil, mg/l, Max	Clause 6 of IS 3025 (part -39)	0.5	0.5	<0.1	<0.1	<0.1	<0.1
xxii	Nitrates (as NO ₃), mg/l, Max	IS:3025 (Part-34)	45	45	26.7	25.7	27	6.9
xxiii	Phenolics (as C ₆ H ₅ OH), mg/l, Max	IS:3025 (Part-43)	0.001	0.002	<0.001	<0.001	<0.001	<0.001
xxiv	Selenium (as Se), mg/l, Max	IS:3025 (Part-56)	0.01	0.01	<0.005	<0.005	<0.005	<0.005
xxv	Silver (as Ag), mg/l, Max	Annex J of IS:13428	0.1	0.1	<0.002	<0.002	<0.002	<0.002
xxvi	Sulphates (as SO ₄), mg/l, Max	IS:3025 (Part-24)	200	400	268.0	294.0	190	3.5
xxvii	Sulphide (as H ₂ S), mg/l, Max	IS:3025 (Part-29)	0.05	0.05	<0.01	<0.01	<0.01	<0.01
xxviii	Alkalinity (as CaCO ₃), mg/l, Max	IS:3025 (Part-23)	200	600	370	350	380	40
xxix	Total Hardness (as CaCO ₃), mg/l, Max	IS:3025 (Part-21)	200	600	640	610	630	30
xxx	Zinc (as Zn), mg/l, Max	IS:3025 (Part-49)	5	15	<0.005	<0.005	<0.005	<0.005
xxxi	Cadmium (as Cd), mg/l, Max	IS:3025 (Part-41)	0.003	0.003	<0.002	<0.002	<0.002	<0.002
xxxii	Cyanide (as CN), mg/l, Max	IS:3025 (Part-27)	0.05	0.05	<0.01	<0.01	<0.01	<0.01
xxxiii	Lead (as Pb), mg/l, Max	IS:3025 (Part-47)	0.01	0.01	<0.005	<0.005	<0.005	<0.005
xxxiv	Molybdenum (as Mo), mg/l, Max	APHA 21 st	0.07	0.07	NA	NA	NA	NA
xxxv	Mercury (as Hg), mg/l, Max	IS:3025 (Part-48)	0.001	0.001	<0.0005	<0.0005	<0.0005	<0.0005
xxxvi	Nickel (as Ni), mg/l, Max	IS:3025 (Part-54)	0.02	0.02	<0.01	<0.01	<0.01	<0.01
xxxvii	Pesticides (Total)	APHA 21 st	Absent	0.001	NA	NA	NA	NA
xxxviii	Polychlorinated biphenyls mg/l, Max	APHA 21 st Edition	0.0005	0.0005	NA	NA	NA	NA
xxix	Polynuclear Aromatic Hydrocarbons (as PAH), mg/l, Max	APHA 21 st Edition	0.0001	0.0001	NA	NA	NA	NA
XL	Arsenic (as As), mg/l, Max	IS:3025 (Part-37)	0.01	0.01	<0.002	<0.002	<0.002	<0.002
XLi	Chromium (as Cr ⁶⁺), mg/l, Max	IS:3025 (Part-52)	0.05	0.05	<0.03	<0.03	<0.03	<0.03
XLii	Trihalomethanes, mg/l, Max	APHA 21 st	--	--	NA	NA	NA	NA
XLiii	Radioactive materials, Bq/l, mg/l	APHA 21 st	--	--	NA	NA	NA	NA
XLiv	Total Coliform (100ml)	IS:1622	Absent	Absent	Absent	Absent	Absent	Absent
XLv	E-Coli (cfu/100ml)	IS:1622	Absent	Absent	Absent	Absent	Absent	Absent

SAMPLE CODE : GW1 - Dharmapura village Bore well water GW2 - Yeshwanthanagar village Bore well water
GW3 - Sushilanagar village Bore well water GW4 - Drinking water Near Mine Office
Samples Collected & Analysed by Mineral Engineering Services, INA - Not Analysed

(M.R. DURGA PRASAD)
GOVT. ANALYST

(M.S. RAJU)
HEAD OF LABORATORY



MINERAL ENGINEERING SERVICES

Recognised by GOI, MOEF&CC Under E(P)A 1986 Vide Gazette Notification
No. S.O. 857(E) dated 26.02.2018. Recognition Valid Upto 25.02.2023



Table No. 10

NOISE LEVEL DATA

MES/NOISE/FR/02/00

Name of the Client		: M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd					
Name of the Project		: Ramanadurga Iron Ore Mine (ML No. 2141)					
Date of monitoring		: 08.04.2022					
Date of Report		: 06.05.2022					
Report No		: MES/NRN/47					
Code No.	Monitoring stations	Day			Night		
		L _{min}	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}
Bufferzone							
N1	Dharmapura	38.0	52.7	57.0	35.0	43.0	47.3
N2	Yeshwanthanagar	40.0	53.2	58.4	34.0	43.8	46.8
N3	Bavihalli village	39.0	51.6	56.7	34.0	42.9	46.8
Corezone							
N4	Core zone Near Mines office	37.0	48.8	56.0	35.0	41.9	45.6
N5	Loading Area	39.0	48.8	63.0	During operation		
N6	Dumping Area	40.0	52.1	66.0	During operation		
Permissible Limits of Ambient Noise Levels as per CPCB Guidelines							
		Leq. Limit dB(A)					
		Day		Night			
	Industrial areas	75		70			
	Commercial area	65		55			
	Residential area	55		45			

(M.R. DURGA PRASAD)
GOVT. ANALYST

(M.S. RAJU)
HEAD OF LABORATORY