

ENVIRONMENTAL MONITORING REPORT

October, 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

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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 : 04.11.2022
 Reference IS 5182 Report No : MES/PMS/ARN/140

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
05.10.2022	10	13	48	27	<20	<1
07.10.2022	9	11	45	22	<20	<1
10.10.2022	5	8	37	21	<20	<1
12.10.2022	8	12	39	25	<20	<1
18.10.2022	7	10	40	24	<20	<1
20.10.2022	9	11	42	28	<20	<1
26.10.2022	10	14	45	26	<20	<1
28.10.2022	8	11	41	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
05.10.2022	0.18	<0.5	<0.5	<0.5	0.15	20
07.10.2022	0.11	<0.5	<0.5	<0.5	0.18	27
10.10.2022	0.15	<0.5	<0.5	<0.5	0.14	20
12.10.2022	0.12	<0.5	<0.5	<0.5	0.15	22
18.10.2022	0.14	<0.5	<0.5	<0.5	0.15	24
20.10.2022	0.11	<0.5	<0.5	<0.5	0.17	20
26.10.2022	0.13	<0.5	<0.5	<0.5	0.30	22
28.10.2022	0.14	<0.5	<0.5	<0.5	0.32	29
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)
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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 : 04.11.2022
 Reference IS 5182 Report No : MES/PMS/ARN/141

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
05.10.2022	7	9	43	23	<20	<1
07.10.2022	11	12	40	24	<20	<1
10.10.2022	6	9	50	29	<20	<1
12.10.2022	7	11	42	22	<20	<1
18.10.2022	9	13	53	29	<20	<1
20.10.2022	9	11	48	27	<20	<1
26.10.2022	7	10	45	26	<20	<1
28.10.2022	8	9	54	32	<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
05.10.2022	0.11	<0.5	<0.5	<0.5	0.31	20
07.10.2022	0.13	<0.5	<0.5	<0.5	0.33	25
10.10.2022	0.13	<0.5	<0.5	<0.5	0.19	27
12.10.2022	0.09	<0.5	<0.5	<0.5	0.27	28
18.10.2022	0.05	<0.5	<0.5	<0.5	0.15	26
20.10.2022	0.11	<0.5	<0.5	<0.5	0.07	26
26.10.2022	0.09	<0.5	<0.5	<0.5	0.16	25
28.10.2022	0.07	<0.5	<0.5	<0.5	0.30	28
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. 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 : 04.11.2022
Reference IS 5182 **Report No** : MES/PMS/ARN/129

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
06.10.2022	10	11	44	24	<20	<1
08.10.2022	12	15	46	28	<20	<1
13.10.2022	10	13	47	26	<20	<1
15.10.2022	8	9	53	29	<20	<1
17.10.2022	5	12	50	28	<20	<1
19.10.2022	6	10	42	24	<20	<1
27.10.2022	7	9	40	25	<20	<1
29.10.2022	8	11	46	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
06.10.2022	0.13	<0.5	<0.5	<0.5	0.07	28
08.10.2022	0.09	<0.5	<0.5	<0.5	0.14	22
13.10.2022	0.08	<0.5	<0.5	<0.5	0.30	23
15.10.2022	0.14	<0.5	<0.5	<0.5	0.18	25
17.10.2022	0.11	<0.5	<0.5	<0.5	0.26	27
19.10.2022	0.09	<0.5	<0.5	<0.5	0.30	28
27.10.2022	0.07	<0.5	<0.5	<0.5	0.18	26
29.10.2022	0.14	<0.5	<0.5	<0.5	0.26	24
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

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 : 04.11.2022
 Reference IS 5182 Report No : MES/PMS/ARN/166

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
05.10.2022	12	14	46	27	<20	<1
07.10.2022	8	12	50	28	<20	<1
10.10.2022	9	11	46	24	<20	<1
12.10.2022	7	9	51	25	<20	<1
18.10.2022	9	10	54	29	<20	<1
20.10.2022	11	13	47	25	<20	<1
26.10.2022	9	11	57	30	<20	<1
28.10.2022	10	14	40	22	<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
05.10.2022	0.11	<0.5	<0.5	<0.5	0.15	25
07.10.2022	0.13	<0.5	<0.5	<0.5	0.09	26
10.10.2022	0.07	<0.5	<0.5	<0.5	0.21	25
12.10.2022	0.09	<0.5	<0.5	<0.5	0.05	27
18.10.2022	0.14	<0.5	<0.5	<0.5	0.33	28
20.10.2022	0.12	<0.5	<0.5	<0.5	0.27	26
26.10.2022	0.09	<0.5	<0.5	<0.5	0.30	26
28.10.2022	0.15	<0.5	<0.5	<0.5	0.18	21
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

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 : 04.11.2022
 Reference IS 5182 Report No : MES/PMS/ARN/165

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
05.10.2022	10	12	52	27	<20	<1
07.10.2022	7	10	50	28	<20	<1
10.10.2022	9	14	42	24	<20	<1
12.10.2022	10	13	47	26	<20	<1
18.10.2022	8	9	50	27	<20	<1
20.10.2022	9	11	43	22	<20	<1
26.10.2022	10	12	50	28	<20	<1
28.10.2022	9	11	53	26	<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
05.10.2022	0.90	<0.5	<0.5	<0.5	0.23	28
07.10.2022	0.13	<0.5	<0.5	<0.5	0.21	23
10.10.2022	0.09	<0.5	<0.5	<0.5	0.25	23
12.10.2022	0.06	<0.5	<0.5	<0.5	0.29	25
18.10.2022	0.09	<0.5	<0.5	<0.5	0.32	27
20.10.2022	0.11	<0.5	<0.5	<0.5	0.15	28
26.10.2022	0.07	<0.5	<0.5	<0.5	0.27	26
28.10.2022	0.05	<0.5	<0.5	<0.5	0.30	24
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. 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	: 04.11.2022
Report No	: MES/MS/ARN/167

Date of sample	Particulate mater ($\mu\text{g}/\text{m}^3$)
05.10.2022	326
10.10.2022	344

Station at & Code	: A - VII, Crushing & Screening
Duration	: 08 Hrs
Date of Report	: 04.11.2022

Date of sample	Particulate mater ($\mu\text{g}/\text{m}^3$)
07.10.2022	370
12.10.2022	418

Station at & Code	: A - VIII, Dumping point
Duration	: 08 Hrs
Date of Report	: 04.11.2022

Date of sample	Particulate mater ($\mu\text{g}/\text{m}^3$)
05.10.2022	420
10.10.2022	512

Station at & Code	: A - IX, Haulage Road
Duration	: 08 Hrs
Date of Report	: 04.11.2022

Date of sample	Particulate mater ($\mu\text{g}/\text{m}^3$)
07.10.2022	405
12.10.2022	415

Ref	: Environmental (Protection) Rules, 2010 (Sixth Amendment)
	Particulate mater ($\mu\text{g}/\text{m}^3$)
Permissible limits for Fugitive Emissions	1200 $\mu\text{g}/\text{m}^3$


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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 : October, 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.	5	8	37	21	6	9	40	22	5	9	40	24
10%	6	9	38	22	7	9	41	23	6	9	41	24
25%	8	11	40	24	7	9	43	24	7	10	44	25
50%	9	11	42	26	8	11	47	27	8	11	46	27
75%	9	12	45	27	9	11	51	29	10	12	48	28
98%	10	14	48	28	11	13	54	32	12	15	53	29
Max.	10	14	48	28	11	13	54	32	12	15	53	29
Avg.	8	11	42	25	8	11	47	27	8	11	46	26
SD	2	2	4	3	2	2	5	3	2	2	4	2
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.	7	9	40	22	7	9	42	22				
10%	8	10	44	23	8	10	43	23				
25%	9	11	46	25	9	11	46	26				
50%	9	12	49	26	9	12	50	27				
75%	10	13	52	28	10	12	51	27				
98%	12	14	57	30	10	14	53	28				
Max.	12	14	57	30	10	14	53	28				
Avg.	9	12	49	26	9	12	48	26				
SD	2	2	5	3	1	2	4	2				
No. of obs	8				8							

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Table No. 8

WATER TEST 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 : October, 2022
Date of sampling : 07.10.2022
Date of Report : 04.11.2022
Report No : MES/PMS/WRN/65
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	8.15	8.22
ii	Dissolved Oxygen (as O ₂), mg/l, Min	IS:3025(Part-38)	4	5.4	5.6
iii	Biochemical Oxygen Demand (as O ₂), mg/l, Max	IS:3025(Part-44)	3	2.0	1.9
iv	Total Coliform (mpn/100ml), Max	IS:1622	5000	142	156
v	Colour (Hazen Units), Max	IS:3025(Part-4)	300	5	5
vi	Fluoride (as F),mg/l, Max	IS:3025(Part-60)	1.5	0.15	0.18
vii	Cadmium (as Cd), mg/l, Max	IS:3025(Part-41)	0.01	<0.002	<0.002
viii	Chloride (as Cl),mg/l, Max	IS:3025(Part-32)	600	80.0	110.0
ix	Chromium (as Cr ⁺⁶), mg/l, Max	IS:3025(Part-52)	0.05	<0.03	<0.03
x	Cyanides (as CN), mg/l, Max	IS:3025(Part-27)	0.05	<0.01	<0.01
xi	Total Dissolved Solids (mg/l), Max	IS:3025(Part-16)	1500	330	346
xii	Selenium (as Se), mg/l, Max	IS:3025(Part-56)	0.05	<0.005	<0.005
xiii	Sulphates as SO ₄ (mg/l), Max	IS:3025(Part-24)	400	38.0	34.7
xiv	Lead (as Pb) mg/l, Max	IS:3025(Part-47)	0.1	<0.005	<0.005
xv	Copper (as Cu),mg/l, Max	IS:3025(Part-42)	1.5	<0.01	<0.01
xvi	Arsenic as As (mg/l), Max	IS:3025(Part-37)	0.2	<0.002	<0.002
xvii	Iron (as Fe),mg/l, MAX	IS:3025(Part-53)	50	<0.05	<0.05
xviii	Phenolic compounds (as C ₆ H ₅ OH),mg/l, Max	IS:3025(Part-43)	0.005	<0.001	<0.001
xix	Zinc (as Zn),mg/l, Max	IS:3025(Part-49)	15	<0.005	<0.005
xx	Insecticides, mg/l, Max	APHA 21 st	Absent	NA	NA
xxi	Anionic detergents (as MBAS),mg/l, Max	Annex K of IS 13248	1	<0.1	<0.1
xxii	Oil and grease, mg/l, Max	IS:3025(Part-39)	0.1	<0.01	<0.01
xxiii	Nitrates (as NO ₃),mg/l, Max	IS:3025(Part-34)	50	19.4	19.8
xxiv	Alpha Emitters (µcurie/ml), Max	APHA 21 st	10 ⁻⁹	NA	NA
xxv	Beta Emitters (µcurie/ml), Max	APHA 21 st	10 ⁻⁸	NA	NA

SAMPLE TYPE :

Note : NA - Not Analysed

SW1 - Nari Halla Up Stream water

SW2 - Nari Halla Down Stream water

Samples Collected & Analysed by Mineral Engineering Services, Ballari

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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 : October, 2022
 Date of sampling : 07.10.2022
 Date of Report : 04.11.2022
 Report No : MES/PMS/WRN/66
 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	1	1	1	<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	7.45	7.85	7.71	8.30
iv	Taste	IS:3025 (Part- 8)	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
v	Turbidity,NTU, Max	IS:3025 (Part-10)	1	5	3.8	4.5	2.1	3.5
vi	Total Dissolved Solids,mg/l, Max	IS:3025 (Part-16)	500	2000	784	1740	1014	64
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	2.4	<0.1	<0.1	<0.1	<0.1
xii	Calcium (as Ca),mg/l, Max	IS:3025 (Part-40)	75	200	114	160	164	13
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	75	470	260	12
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	0.78	0.91	0.82	<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	64.3	144.0	104.5	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)	1	1	<0.01	<0.1	<0.01	<0.01
xxii	Nitrates (as NO ₃),mg/l, Max	IS:3025 (Part-34)	45	45	40.0	70.0	43	3.0
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	150.0	180.0	100	4.5
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	490	710	420	40
xxix	Total Hardness (as CaCO ₃),mg/l, Max	IS:3025 (Part-21)	200	600	550	990	840	42
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
xxxix	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, I NA - 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	: 07.10.2022						
Date of Report	: 04.11.2022						
Report No	: MES/NRN/58						
Code No.	Monitoring stations	Day			Night		
		L _{min}	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}
Bufferzone							
N1	Dharmapura	38.0	52.9	58.0	35.0	42.9	47.0
N2	Yeshwanthanagar	40.0	51.7	56.0	34.0	41.0	46.0
N3	Bavihalli village	38.0	51.7	57.0	34.0	41.8	46.3
Corezone							
N4	Core zone Near Mines office	36.0	46.7	54.0	35.0	41.1	45.0
N5	Loading Area	40.0	48.9	63.0	During operation		
N6	Dumping Area	43.0	54.4	68.0	During operation		
Permissible Limits of Ambient Noise Levels as per CPCB Guidelines							
Leq. Limit dB(A)							
		Day	Night				
	Industrial areas	75	70				
	Commerecial area	65	55				
	Residential area	55	45				


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