ENVIRONMENTAL MONITORING REPORT

December, 2024

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

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,

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

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2025

TEST REPORT

Table No. 1

AMBIENT AIR QUALITY

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

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

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - I, 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 , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2025

TEST REPORT

Table No. 2

AMBIENT AIR QUALITY

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

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

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - II, 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 , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2025

TEST REPORT

Table No. 3

AMBIENT AIR QUALITY

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

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

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - III, Sushila Nagar village

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/24/12/3-0002	11	13	37	19
03.12.2024	N/24/12/3-0019	12	15	46	24
11.12.2024	N/24/12/4-0120	9	11	51	28
12.12.2024	N/24/12/4-0144	10	14	57	32
16.12.2024	N/24/12/5-0015	11	13	50	27
17.12.2024	N/24/12/5-0056	7	9	48	26
25.12.2024	N/24/12/6-0163	8	12	38	18
26.12.2024	N/24/12/6-0190	9	11	43	24
Limits for Industrial , Residential, Rural and other Areas		**80 24 Hrs**	**80 24 Hrs**	**100 24 Hrs**	**60 24 Hrs**

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

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2025

TEST REPORT

Table No. 4

AMBIENT AIR QUALITY

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

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

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - IV Sandur Town

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)
04.12.2024	N/24/12/3-0032	11	12	44	25
05.12.2024	N/24/12/3-0057	11	12	35	18
11.12.2024	N/24/12/4-0124	12	17	45	28
12.12.2024	N/24/12/4-0148	10	14	58	30
18.12.2024	N/24/12/5-0081	14	18	58	33
19.12.2024	N/24/12/5-0094	10	11	48	25
27.12.2024	N/24/12/6-0201	8	10	39	20
28.12.2024	N/24/12/6-0238	11	17	43	25
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2025

TEST REPORT

Table No. 5

AMBIENT AIR QUALITY

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

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

Sample Collected by : Environmental Laboratory (Unit of Mineral Engineering Services)

Station at & Code : A - V Core zone Within 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/24/12/3-0003	7	10	51	28
03.12.2024	N/24/12/3-0020	8	10	44	23
11.12.2024	N/24/12/4-0121	9	13	50	28
12.12.2024	N/24/12/4-0145	9	10	47	25
16.12.2024	N/24/12/5-0016	13	11	49	27
17.12.2024	N/24/12/5-0057	9	13	53	28
25.12.2024	N/24/12/6-0164	9	11	54	30
26.12.2024	N/24/12/6-0191	7	11	48	26
Limits for Industrial , Residential, Rural and other Areas		80 24 Hrs	80 24 Hrs	100 24 Hrs	60 24 Hrs

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

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2025

TEST REPORT

Table No. 6

Fugitive Emission

Name of the Client : M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
Name of the Project : Ramanadurga Iron Ore Mine (ML No. 2141)
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 (µg/m^3)
02.13.2024	N/24/12/3-0014	321
11.12.2024	N/24/12/4-0122	456

Station at & Code : A - VII, Crushing & Screening
Duration : 08 Hrs

Date of sample	Lab Code	Particulate mater (µg/m^3)
03.12.2024	N/24/12/3-0021	485
12.12.2024	N/24/12/4-0146	396

Station at & Code : A - VIII, Dumping point
Duration : 08 Hrs

Date of sample	Lab Code	Particulate mater (µg/m^3)
02.13.2024	N/24/12/3-0015	433
11.12.2024	N/24/12/4-0123	488

Station at & Code : A - IX, Haulage Road
Duration : 08 Hrs

Date of sample	Lab Code	Particulate mater (µg/m^3)
03.12.2024	N/24/12/3-0022	463
12.12.2024	N/24/12/4-0147	399

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

	Particulate mater (µg/m^3)
Permissible limits for Fugitive Emissions	**600 µg/m^3**

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

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2025

TEST REPORT

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 : December, 2024

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	11	42	22	7	11	37	20	7	9	37	18
10%	7	12	42	25	8	11	44	20	8	10	38	19
25%	9	12	46	26	10	12	47	22	9	11	42	23
50%	9	14	51	26	10	15	50	26	10	13	47	25
75%	11	15	53	27	11	15	54	27	11	13	50	27
98%	12	18	56	31	12	18	56	30	12	15	56	31
Max.	12	18	56	32	12	18	56	30	12	15	57	32
Avg.	9	14	49	27	10	14	49	25	10	12	46	25
SD	2	2	5	3	2	3	6	4	2	2	7	5
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.	8	10	35	18	7	10	44	23
10%	9	11	38	19	7	10	46	24
25%	10	12	42	24	8	10	48	26
50%	11	13	45	25	9	11	50	28
75%	11	17	51	29	9	12	52	28
98%	14	18	58	33	12	13	54	30
Max.	14	18	58	33	13	13	54	30
Avg.	11	14	46	26	9	11	50	27
SD	2	3	8	5	2	1	3	2
No. of obs	8				8			

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

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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

ENVIRONMENTAL LABORATORY

(UNIT OF MINERAL ENGINEERING SERVICES LLP)

Recognised by BIS, FSSAI, ISO:45001:2018 Certified Laboratory

Recognised by MoEFCC(CPCB) under E(P) Act 1986 Recognition valid upto 23.05.2025

TEST REPORT

Table No. 8

Name of the Client	: M/s. Sri. Kumaraswamy Mineral Exports Pvt. Ltd
Name of the Project	: Ramanadurga Iron Ore Mine (ML No. 2141)
Sample Collected by	: Environmental Laboratory (Unit of Mineral Engineering Services)
Particulars of sample collected	: SW1 - Nari Halla Up Stream water, SW2 - Nari Halla Down Stream water
Date of sample collection	: 14.12.2024
Date of sample receipt	: 16.12.2024
Issue Date	: 30.12.2024

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

Lab Code		N/24/12/4-0275	N/24/12/4-0276	Limits For Stream Water Standards	Method of Testing
Sl.No.	Parameters	Results			
		SW1	SW2		
1	Colour (Hazen Units), Max	10	10	300	IS:3025(Part-4)2021
2	pH	8.30	8.15	6.5 to 8.5	IS:3025(Part-11)2022
3	Dissolved Oxygen (as O_2), mg/l, Max	5.3	5.4	Min 4	IS:3025(Part-38)1989RA 2019
4	Oil & Greease, mg/l	<0.1	<0.1	0.1	IS:3025(Part 39)2021
5	Total Dissolved Solids (mg/l), Max	600	585	1500	IS:3025(Part-16)2023
6	Nitrates (as NO_3),mg/l, Max	18.40	20.50	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	210.0	185	600	IS:3025(Part-32) ;1988RA2019
10	Fluoride (as F),mg/l, Max	0.75	0.78	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_6H_5OH),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	52.0	56	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	<3.0	<3.0	3	IS:3025(P-44) 2014
22	Total Coliform (MPN/100ml)	325	360	5000	IS:1622:1981

"'END OF REPORT"

BINU MANI
T.M. - Microbiology
Govt. Analyst / Authorised Signatory

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

948, 2nd Cross, St. Thomas Town Post, Kammanahalli, Bangalore - 560 084.
Phone : 080-25432969 Tel/fax : 25432968. E-mail : mesbng@gmail.com, www.envtest.in

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